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East Europe Report

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EAST EUROPE REPORT

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East Berlin DDR-VERKEHR in German Vol 19 No 10, Oct 86 (Signed to press 13 Aug 86) pp 290-292

[Article by Otto Arndt, GDR Minister for Transportation: "Tasks and Solutions in the Comprehensive Intensification and Modernization of the GDR's Uniform Socialist Transport System" (Slightly shortened version of an article which is planned for publication in the journal of the CEMA secretariat): "Economic Cooperation between CEMA Member Countries"]

[Text] I. Status, Tasks and Responsibility of the Transport System in the GDR's Developed Socialist Society

With the further shaping of the developed socialist society in the GDR, integration of the transport system with all sectors of the economy is increasing, and, like every industry, the transport system, as a factor of productivity and efficiency in the context of the economic reproduction process, must make an increasingly more significant contribution.

At the same time the socio-political function of the transport system is increasing, especially in implementing passenger traffic, in feeding and caring for passengers and in tourism.

The obligations and responsibilities of the transport system can be summarized in four basic tasks:

1. In respect to capacity availability, processing, servicing and transporting there must be more efficient and higher quality accommodation of the growing needs of the citizens in passenger traffic and tourism.

2. The transport of goods, which is socially essential, must be implemented in a high quality manner and with declining specific costs for the purpose of meeting the demand smoothness of the economic reproduction process and supplying the people.

3. For the steadily increasing motorization of individuals it is necessary to give full consideration to maintaining the basic network of roads, city streets and the areas for stationary vehicles and also to developing vehicle maintenance capacities.

4. The tasks in international transport must be realized systematically and with great efficiency.

II. Continuation of the Proven Transport Policy Design at a Qualitatively Higher Level

With the resolutions of the 11th SED Party Congress, and especially with the economic strategy for developing the economy with an eye on the year 2000, the working people in the GDR transport system are confronted with new and important tasks.

The further shaping of the developed socialist society, the associated dynamic growth of the economy and the systematic improvement of working and living conditions require comprehensive intensification and modernization of the uniform socialist transport system.

The first task includes increasing the quality of the available capacity in commuter, school children and tourist traffic, as well as guaranteeing punctual and reliable transport, shortening travel time and improving passenger processing, service, food and information.

The accelerated continuation of the housing construction program, the resultant essential traffic-based development of new residential areas and places of work and the increasing mobility of the citizenry as an expression of the increased quality of life all require further increases in capacity in public passenger transport.

The local traffic systems in the large cities and congested centers will be shaped more attractively and in a manner which is more friendly to the environment through the priority use of electrically operated transport means, expansion of the network of streetcars, expansion of intra-urban electric railroad traffic and establishment of new bus networks.

Available capacity and attractiveness will also be increased in long-distance and international traffic. Intercity express train links are being established between the bezirk cities of Dresden, Leipzig, Halle and Magdeburg. To fully support the growing demands in tourism and long-distance commuter traffic and because of increasingly closer international cooperation the capacities of GDR civilian aviation will have an above-average increase, primarily through more intensive utilization of the airplanes.

The principle of self-service in buying tickets around the clock and automatic seat reservations will be implemented to serve travelers through the broad-based efficient use of microelectronics.

The further development of the Berlin transport facilities is of special importance. In agreement with the resolutions of the GDR party and government leadership on the further development of Berlin as a political, economic, scientific and intellectual-cultural center in the GDR, the Berlin transport system, with the support of many working people from the other bezirks in the country, will be significantly modernized and be made more efficient for the citizens of Berlin and their guests. The main points in this are rebuilding the main railroad station, linking the newly emerging city district of Berlin-Hellersdorf to the subway and the extension of the intra-urban electric railroad beyond the city district of Berlin Hohenschoenhausen along Berlin's outer ring.

Rebuilding all subway and intra-urban electric railroad stations will be completed by 1990. By that time all streetcar traffic in Berlin will also be converted to modern TATRA vehicles.

In goods transport--and this is the second important task--the issue is to realize the transport requirements, which are based on the economy, through efficient transport technologies with a further reduction in the specific outlays for energy, material, working time and costs. In addition, the technological level and efficiency of the railroad will be raised as a priority item.

Electrification of 1,500 additional kilometers of main routes, repair of the route network and other measures will better accommodate the importance of the railroad as the most important transport branch through the use of modern transport technologies. The share of transport volume by trains with electric drive units will increase to 60 percent by 1990.

The program which was adopted by the 11th SED Congress includes the electrification of the routes in the Cottbus coal district, the addition of the ports Wismar, Stralsund, Sassnitz and the newly built ferry port of Mukran, expansion of the electrified network in the Berlin area, and the addition of the border railroad stations in Frankfurt/Oder and Bad Schandau.

Industry will provide the GDR railroad with 500 additional electric locomotives for use in the electrified network.

A new generation of microcomputer-controlled transformer plants will be introduced to stabilize the railroad's power supply.

Gradually computer-assisted technologies will be introduced to control the operations of the railroad and vehicle use. The use of vehicles in cargo truck traffic will also be coordinated with the assistance of computers. In all, through the use of key technologies, especially microelectronics and robot technology, we can guarantee that the entire technological process will be automated.

Rationalizing the transport and transshipping processes is closely linked with territorial rationalization. Through close cooperation between the transport system, the combines and enterprises of the economy and the local organs in the GDR bezirks and kreises, important capacity reserves will be developed for coping with the transport and transshipping tasks.

The objectives of the 1986-1990 5-Year-Plan to further decrease specific transport costs require even closer integration of production and transport. That is a third fundamental task. The "Directive of the 11th SED Congress in Respect to the 5-Year-Plan for the Development of the GDR's Economy from 1986 to 1990" also sets the task of making a decisive contribution to limiting absolute transport costs through the use of new, efficient methods of optimizing transport and the gradual establishment of computer-assisted production-transport chains.

In contrast to the existing (simple) processes for optimizing transport and delivery services the tasks, which must thus be solved, of comprehensive production-transport rationalization will become substantially more complex and extensive. They require deep analytic penetration into the reproduction processes of the combines of the GDR economy and the transport system and their efficient integration. Their primary function consists mainly of:

--shortening the reproduction process in the producing sectors of the economy,

--increasing the stability and continuity of the reproduction process,

--decreasing material inventories and current assets, and in general

--decreasing specific transport costs as an essential component of economic production consumption.

Development of computer-assisted production-transport for iron ore from Rostock port to Eisenhuettenstadt was begun in 1986. By 1990 such integrated transport technologies are to be introduced for other kinds of goods.

A fourth important task for intensifying the GDR transport system consists of the further development of the division of labor between the transport branches of the public transport system and between public vehicle traffic and vehicular factory traffic.

Shifting transport by road to the railroad and inland waterway shipping, which are more favorable in respect to energy and cost, will be continued in the period up to 1990. Container and pallet traffic will be further expanded in order to rationalize the divided transport which will thus increase. The share of capacity of public vehicle traffic in the overall transport of goods by road will be increased by taking on additional marketing and delivery transport activities for factory traffic. Factory traffic in the future will realize only the production-based technological special transport functions which are also specific to an industry.

Transport with inland waterway shipping is to increase to 140 percent by 1990 as compared to 1985. New technologies, more efficient use of transport space, and shortening the wharfage time should make a decisive contribution to this.

Maintaining the trafficability of the network of roads, a fifth important task for the transport system, requires increased utilization of new technologies based on domestic raw materials, which save material, and the reduction of essential transport limitations in construction and maintenance work.

Maintenance of roads and bridges will be shaped more effectively and efficiently through uniform management and the concentrated use of repair capacities. The use of microcomputer-assisted, traffic-based control systems is being prepared to guarantee safe, evenly flowing traffic and to increase the handling capacity of heavily used municipal traffic junctions.

Great socio-political importance attaches to improved covering of needs for service and repairs on automobiles and motorcycles for the general populace.

By 1990 volume is to be increased to 157 percent over 1985. The way to do this involves better utilization of existing capacities in the state-owned enterprises and in cooperative and private artisanry on up to extensive expansion of workshops and repair enterprises. This is a sixth important task for the working people in the GDR transport system. A seventh task consists of a significant increase in the contribution of the transport system itself to the development of the material technical basis of the transport system which will accommodate demand. Automation and partial automation of entire production segments will create the prerequisite, for example in the GDR railroad repair shops, for intensified new construction of freight cars, railway excursion cars and containers and the most efficient repair of them.

In the construction and repair processes considerable effort will be devoted to achieving and jointly defining the international technological level. Rebuilding and modernizing existing transport facilities and means have absolute priority. Key modern technologies will find increased use to do this.

Among other things, the material-technical base for large container traffic will also be expanded through reconstruction, modernization and the operation of the new container transshipping sites.

An eighth task for the working peoples of the GDR transport system stems from the growing demands of GDR foreign trade and the deepening of cooperation between the socialist sister countries. In 1990 the transshipping of goods in the GDR's ports will increase to 28 to 29 million tons. Along with that there will be a significant increase in maritime traffic capacity. Goods transported by truck on an international basis and inland waterway transport will be developed at the same time. Initiating ferry service between the GDR and the USSR according to the plan in October 1986 is of great importance.

This largest effort at integration to date in the transport system sector between the GDR and the USSR, on whose realization work has been systematically in progress since 1982, takes into the account, from the point of view of transport, the increased scope and higher level of specialization and cooperation of economies.

At the same time the measures introduced to develop capacity reserves at heavily burdened border railroad stations, on routes both to and from destinations, to increase the handling capacity of the transit roads and ports and to perfect transport technologies are being systematically continued.

Specialized transport technologies, which are based on the kinds of goods, will be used to a greater degree. The function of the DEUTRANS [Deutrans International Shipping and Charter VEB] combine as a foreign trade forwarding agent will be further developed.

Further intensification in international transport between the CEMA member countries is being accomplished primarily in three areas:

--favorable assignment of tasks between the carriers in respect to cost

--perfecting joint solutions in the use of transport means

--further comprehensive rationalization in every transport carrier itself.

A new stage in integrating the economies of the socialist countries and their railroads was introduced in June 1984 with the highest level CEMA economic conference. This is the source of even higher demands on the multilateral organizations of the railroads.

Important questions of long-term development of cooperation by the railroads were dealt with by the 73rd meeting of the Permanent Transport Commission (SKT) of CEMA in 1985 in Frankfurt/Oder. This SKT meeting adopted the ranges of transport capabilities for the period 1986 to 1990, continued the efforts to perfect the international railroad transit tariff and confirm the essential basic parameters for the system of high-speed "Interexpress" excursion trains which is to be gradually established between the CEMA countries. Such a link between Berlin, capital of the GDR, and Prague, capital of the CSSR, was created with the 1986-1987 timetable for the year.

The CEMA organizations have particular importance for perfecting the joint solutions in the use of transport means.

The agreement to establish and jointly utilize the OPW [joint freight car pool], which was signed in December 1963 at the 10th meeting of the CEMA executive committee, has since been fully confirmed and has resulted in a marked increase in efficiency by avoiding idle times, accelerating freight-car turnaround and providing the main railroad lines and border railroad stations with relief. These good results must be improved even more; this means that especially accounting and control by computer-assisted processes must be accelerated and developed more objectively.

This also applies to the further perfection of the system of joint use of the CEMA countries' large container fleet (SPC). The SPC which was created in 1974 on the basis of the positive experiences from OPW work and which was put into practice in 1978 resulted in the extraordinary development of container traffic between the CEMA countries.

To further increase capacity and for more efficient utilization of the large container fleet it is not necessary in particular to perfect economic controls. This applies especially to the joint establishment of stimulating rates and efficient management of balancing empty containers.

In all, the OPW and SPC organizations have proved their value. They are the result and expression of the continually deepening cooperation between the CEMA member countries in the context of socialist economic integration.

The need for accelerated use and economic application of the results of science and technology demand even more efficient use of the scientific-technical potential of the CEMA member countries for the solution of common tasks.

III. Qualitatively New Tasks for Managing and Planning Transport

The economic strategy for developing the economy with an eye on the year 2000 confronts the working people of the GDR transport system with qualitatively new tasks for managing and planning transport. The focus is on:

--more efficient shaping of management organization to be in full control of the new demands from comprehensive intensification of all phases of the reproduction process,

--further developing central state planning and balancing, particularly in the area of goods transport, and even more efficient linking in managing the transport system between the branches and territories,

--aiming evaluation of performance of the combines and enterprises of the transport system at the key questions of increased capacity and efficiency,

--enhancing the interest of the combines and enterprises in profit growth as a value-based expression of the economically distributable surplus product and a decisive share of the national income,

--enhancing the role of industrial prices, including transport system rates, as a standard of value for capacities and consumption,

--even closer linking of plan and economic accounting in the area of science and technology.

For example, lowering specific transport costs must, of course, always be considered as a total economic task, nevertheless, the transport system must take a leading role in this.

In respect to mobilizing and organizing, there must be an impact on all branches of the economy. That is a strong demand. It stems primarily from the necessity of achieving important progress in the period up to 1990 in the comprehensive optimizing of production and transport and establishing step by step computer-assisted production-transport chains. The economy as a whole must be induced to effect transport capacities with the highest level of economy and in every instance to select the most efficient transport option.

How the task for consistent implementation of SED economic strategy are also fulfilled in the GDR's transport system depends not least on the further perfecting of management and planning, on more effective use of economic leverage and stimuli. In a manner which is even better than that to date we must reach the point where in all combines and enterprises of the GDR's uniform socialist transport system up to and including every working person improving the ratio of cost and result will become the standard of economic thought and action.

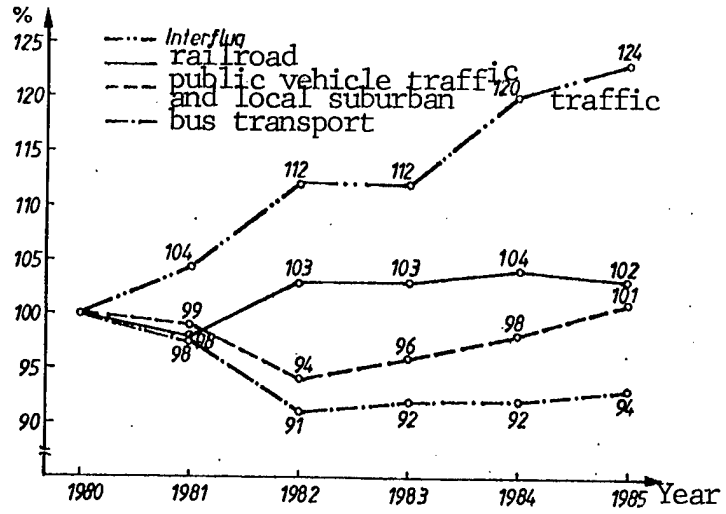

Figure 1. Index of passenger transport capacity (1980 = 100 percent)

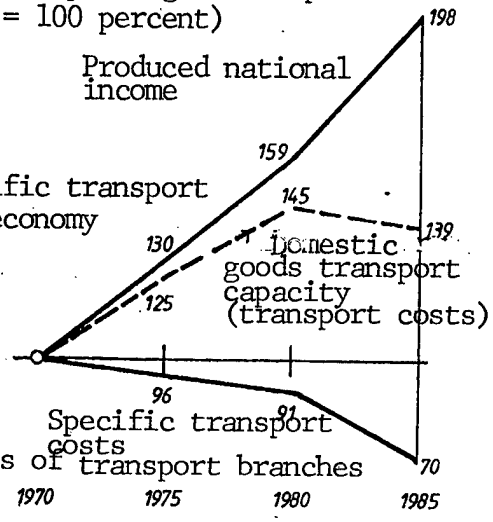

Figure 2. Specific transport costs for the economy (1970 = 100)

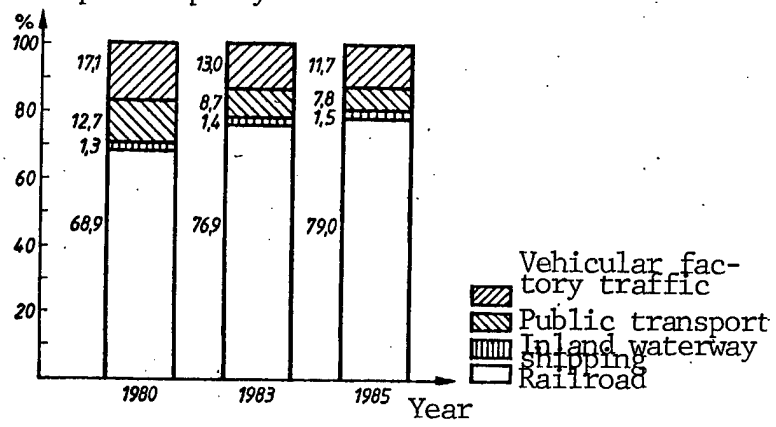

Figure 3. Shares of transport branches in the domestic goods transport capcity

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PROSPECTS, PROBLEMS OF TRADE WITH FRG EXAMINED

Cologne DEUTSCHLAND ARCHIV in German Vol 19 No 10, Oct 86 (signed to press 26 Sep 86 (pp 1085-1094)

[Article by Dr Fritz Homann, senior executive in the Federal Government, head of the Department of Inner German Trade Relations in the Federal Ministry of Economics in Bonn: "On the Future of Inner German Trade"]

[Text] Voices have often been raised in the past, predicting future difficulties for inner German trade (IDH).(1)

Healthy skepticism has always been indicated, because trade between the two German states tends more than other bilateral trade relations to move in a narrow sphere of interests between politics and business. On our part this is rather more than just a different assessment of the political importance of this trade during the nearly 35 years it has been carried on.(2) On the GDR side, political aspects reign supreme, and GDR foreign trade is definitely subordinated to them (though such influences by the GDR were not often obvious, they were "demonstrated" on occasion by spectacular one-off decisions such as the order placed with an Italian syndicate for the construction of a major steel plant).

As regards primary economic aspects, three basic issues gave rise to doubts of the positive future of IDH: Economic development in the GDR, GDR indebtedness (both bilateral and vis-a-vis the West as a whole), and the structural trends of this trade.

Difficulties of the GDR Economy

Consideration of the GDR's economic strength is crucial for IDH in so far as the weaker partner (definitely the GDR) ultimately decides the rate of growth in the given system of strictly bilateral clearing transactions that always aims at a balance.(3) It was often doubtful whether the GDR economy was in fact able to make available sufficient commodities for an adequate rate of growth. Economic conferences tended to predict crises in the GDR economy. Though mistrust of published GDR statistics is entirely warranted, no actual disasters have ever occurred.

The fact remains that the GDR economy faces with a perennial dilemma. On the one hand, the GDR leaders need and wish to make available increasingly more and better quality goods for their own people and, especially, the satisfaction of its obligations within CEMA. It is due not only to its enormous debts to the Soviet Union--about 3 billion transferable rubles--that the GDR, just like the other CEMA countries, is subject to greater pressure from the Soviet Union to come up with even more capital equipment and industrial consumer goods. Gorbachev's ambitious modernization plans, too, are bound to confront the GDR economy with additional demands.

On the other hand, the GDR is bound to note that its national economy lacks the productive efficiency to accomplish all this, because its productivity and efficiency are too low. Without the thoroughgoing modernization of its industrial structure (that, in turn, seems either quite impossible or possible only very slowly without greater use of Western technology), the GDR increasingly runs the risk of diverging more and more from its own targets. The deliberate restraint on investments in recent years and the temporary zero solution with regard to Western imports of plant and equipment have certainly caused or expanded a technology and productivity gap, and it will be impossible to close this in the near future.

True, the GDR leaders appreciate the necessity of more investments: The coming 5-Year Plan, for example, provides for a definite rise in nominal investment expenditure (M346 billion).(4) This would once more involve an investment policy to keep pace with the overall economic growth planned.

Greater Orientation to the West?

At the same time it is doubtful whether the GDR intends to increase its imports from the West.

The GDR was able to rapidly deal with its liquidity and debt crises in recent years (through 1983) and earned international respect thereby. However, despite its large reserves of foreign exchange(5) and excellent credit standing, we can hardly expect the GDR to abandon its restraint with regard to imports from the West and return to a new import push. The GDR leaders have become very cautious, indeed almost excessively so. They appear to be governed by the maxim "to never again land in a crisis such as in 1981-1983."

The directive to the 1986-1990 Five-Year Plan therefore includes several mentions of "economic unassailability." GDR "trade political scope" in trade with the West is to be expanded. That, however, is more likely to mean export surpluses than a rise in imports.

This basic attitude of the GDR leaders is surely due also to appreciation of past mistakes or planning defects. They had expected a major technological leap to follow the extensive purchases of complete and large-scale turn-key projects in the West in the late 1970's, but this failed to materialize. It was simply not enough to purchase a major plant, because general economic coordination with previous and succeeding groups tended to be lacking. The economic leaders discovered that efficient implantation in the national

economy would have needed to be combined with extensive "coordinating investments." These, however, had not been provided for in the plan.

In the steel sector, for example, the GDR still has no hot wide strip mill--despite extensive purchases of plan from the West--, and yet it requires this mill to make possible the abandonment of mass steel in favor of quality steel. (Actually such a mill is now being constructed by the USSR, and this is likely to involve more preprogrammed coordination problems.) Purchase of an engine line from VW showed that the modernization of GDR car production needs to involve more than a new engine conception.

It is also generally evident that the issue of the GDR's greater orientation to the West is not considered in terms of economic criteria alone. Ultimately it is linked to the planning system itself or its more or less flexible handling. Admittedly, the GDR leaders maintain that the well functioning planning system has proven to be efficient, and that at most it might be necessary "to perfect" it. However, the basic problems inherent in the system are unlikely to be altered by such tinkering as has been carried on for years. The "great leap forward" cannot possibly happen without the at least temporary break-up of the planning framework (vide the People's Republic of China).

For superior political reasons, the GDR is less flexible in this respect than other CEMA countries. The situation will therefore remain much the same as before: The GDR economy managed on many occasions to "muddle through" and was indeed quite successful within the framework of the system. It is impossible, though, by such methods to realize ambitious goals.

It is quite remarkable that the frictions in the GDR national economy hardly directly affected IDH. IDH was not touched by the GDR's debt crisis(6); in fact the contrary occurred: While GDR imports from OECD countries dropped by 28 percent in 1980-1984, our deliveries to the GDR rose by 20 percent. Not involving foreign exchange, the IDH clearing system was at a decided advantage. We should also note that IDH has an additional function in view of the permanent "borderline" situation of the GDR economy: It serves as a "buffer" for the quick and short-range adjustment of plan gaps or plan deviations.

Structural Weaknesses of IDH

Not even the so-called structural weakness of trade turned out to be an adverse factor, though it had been the subject of apprehension ever since the mid-1970's. To be sure, the structure of purchases from the GDR in particular does not resemble the normal system of trade exchanges between two highly industrialized states. At 12 percent, investment goods are underrepresented in GDR sales. Still, we tend to forget that, in view of our own outstanding position in the international competition, not only the GDR finds it hard to penetrate the FRG market; the same applies to some extent to our Western trading partners. Moreover, with regard to capital goods the GDR is the leader within CEMA and subject to binding obligations, especially toward the

Soviet Union. Investment goods accounted for about 70 percent of total 1984 GDR exports to the USSR. Of course this does not mean that there are no problems from structural aspects; I will deal with them at a later point.

IDH Continuity in the Past

From the overall standpoint neither the doubts nor the fears with regard to the positive development of IDH have not been confirmed in the past. IDH has grown uninterruptedly for the past 13 years. In the past 5 years alone the annual rise in turnover amounted to roughly 1 billion VE [accounting units in inner German trade] per annum. Admittedly, since 1975 IDH (+ 118 percent) rose less than our total foreign trade (+ 146 percent). However, we need to consider that the development of world trade prices and rates of exchange makes a far greater impact on foreign trade than on the "domestic" trade between the two German states. By comparison with our trade with the other CEMA countries (excluding the USSR)--51 percent--, IDH growth is more than double. In general IDH has for many years past demonstrated a dynamism that far exceeds the trade with many other partners. Two issues must be considered crucial for this positive trend:

1. IDH has become politically emancipated. At the present time it is no longer in any real danger of being "misused" for political purposes. On the contrary, both parties regard it as a "stabilizing factor" in their relations (it is interesting to note that they both use the same terms). Indeed, we might go so far as to assert that politics have discovered trade to be something exclusively beneficial to them. As a result IDH no longer represents a tool "for all eventualities." Nor is this assessment changed by the party political discussion in connection with the GDR's treatment of asylum seekers, though this is incompatible with good bilateral relations. The Federal Government has categorically rejected the demand to use trade for the exertion of any kind of pressure.(6a) From our standpoint, at least, this new German policy shield enables IDH to develop largely according to its own economic criteria. This fact was much in evidence at last year's swing negotiations. A new 5-year swing agreement was concluded without much political debate and almost unnoticed by the public. In conjunction with its accompanying agreements (on energy and capital goods), it left no room for any impressions such as aroused by earlier regulations, that it might be possible to buy political concessions by means of the swing. The package of agreements therefore counts as part of a positive framework for the future.

2. IDH demonstrates some "built-in stabilizers":

We know that IDH holds a relatively stable share in the GDR's external trade. Ever since the 1950's, it has amounted to 6-9 percent. After the USSR, the FRG is the GDR's second most important trading partner. Within the GDR's trade with the West, IDH has accounted for 50-60 percent at all times. While this is more of a formal-statistical than analytical argument, it gains importance from the fact that this distribution held up quite independent of the prevailing political climate.

According to the latest GDR statements, these relations are unlikely to change much. The GDR also continues to be interested in the expansion of inner

German economic relations (7). At the same time it wishes to and indeed should avoid shifts in priorities. In answer to the DIE ZEIT interviewer's question about the importance of trade between the two German states, Honecker pointed out that 70 percent of GDR external trade occur within CEMA, and that he intended to stick to this ratio. To some extent his words are certainly a counter to certain critical remarks on special German-German trade relations, heard in Poland, the CSSR and Hungary, in particular.

IDH's Special Status

These special relations and their various features have served to largely define the importance of IDH in the GDR's external trade. IDH offers substantial benefits to both trade partners, in other words the West German entrepreneur and the GDR partner (or, if you like, the GDR itself), particularly by the bilateral clearing system, the special value-added tax provisions and--as a diminishing factor--the exemption from customs duties and levies. It would make little sense to become involved in the calculations of benefits much discussed at an earlier time and to put a figure on the benefits.(8) Even at the time, these calculations were certainly based more on political considerations than intended to be proper scholarly accounts. Still, the incentive function still remains. All major parties have advocated it from the political aspect with regard to the value added tax provision ever since the latter's introduction in 1967. The special status within the EC defines it in political terms, and it is linked with the German issue as such.

At the same time it would be a mistake to overstate the EC special status: Any undue neglect of the other EC members as GDR trade partners would be bound to revive the latent criticism of the EC special status. The development of GDR trade with the West in 1985 (sharply increased deliveries by us in IDH--+ 18 percent with a definite balance of trade surplus) and, on the other, a considerable drop in exports to the GDR by the other EC countries (- 18 percent and a deficit status of these countries) should not, therefore, be taken to represent a trend. And yet the proportion of GDR purchases in IDH in total GDR imports from the West has risen to 64 percent in 1985--in 1980 it only accounted for 54 percent.(9)

Such developments may well result in discussions in the course of the reform of the EC domestic market. Details of the preventive measures included in the EC charter as safeguards against possible IDH interference with the other EC partners might well be used to agitate against the special status.

Incidentally, the same applies to the forthcoming negotiations about a treaty between the EC and CEMA. Both German governments are called upon in their respective economic communities to plead for the preservation of the special status.

Broad Range and Strong Corporate Involvement

Other not quite so fundamental aspects also make a contribution to a stable framework:

-- In contrast to other trade with the West, for example, that is restricted to a few product sectors only, IDH extends across the entire product range of the commodity register. The broad range definitely makes it possible within certain limits to equalize fluctuations.

-- As a result of the broad range, some 60,000 contracts are annually concluded in IDH. This involves more than 6,000 mainly medium-size companies. Some of these contracts overlap with longer-term agreements at government level (such as those on mineral oil and nonferrous metals) as well as at corporate level, and this has a stabilizing effect on trade. Another such factor is presented by supplies for West Berlin. As many as 30 percent of GDR sales are accounted for by West Berlin.

Summing up, we are probably justified in assuming that the present situation is not unfavorable to the continuing development of inner German trade. We should certainly not exaggerate any misgivings. Nevertheless I am bound to agree with Otto Wolff who recently pointed out in Jena that it would be prudent right now, in view of changing economic circumstances, to reflect on the future of inner German trade, to consider whether its structure is sound, where the future key points will be situated, and what might bring about additional growth impulses.

1986 Decline

Such reflections and misgivings are aroused less by this year's expected short-tern decline in IDH, due to the price trend on international oil markets. Oil accounted for about 20 percent of total 1985 GDR sales (including services) in IDH. Assuming an average 40-50 percent price drop, the GDR is bound to record lower IDH earnings in the amount of roughly 1 billion VE, specially because lower oil prices also affect some other sectors, in particular chemicals (often to quite a substantial extent).(10) Other commodities are unlikely to make up this loss, though the economic development in the FRG will certainly provide some demand push for IDH, too.

Competitive Difficulties on Western Markets

Misgivings are aroused precisely by our awareness that the GDR may not be able to utilize such additional FRG demand for increasing its sales to us.

It is evident that the GDR is meeting with increasing competitive difficulties on Western markets, particularly in traditional key sectors such as textiles and clothing. Due to some extent to the declining exchange rate of the dollar, a long-standing export weakness has been exposed to the full glare of the day. This weakness had earlier been hidden by the former dollar trend and, above all, by the structural shifts in the flow of trade (the strong expansion of oil products).

In recent years the structure of IDH purchases (and deliveries) has changed increasingly to basic materials (and, therefore, has had a lower positive effect on employment). In the past 10 years the proportion of basic materials and producers' goods has risen from 43 percent to 54 percent. At the same time both consumer goods and farm products have lost considerable ground

(dropping from 47 percent to 34 percent). In the case of consumer goods, this decline is accounted for exclusively by textiles and clothing. This adverse trend is even more obvious from the aspect of market conditions in the FRG. Worse yet from the GDR standpoint--the FRG is not just another sales outlet. In fact, when we look at total 1984 GDR exports to the West, the FRG market absorbed 76.9 percent of GDR textiles and 87.8 percent of clothing; in the case of some items as many as 40 percent of total GDR output were sold to FRG firms. Clothing imports from the so-called threshold countries have risen by almost 170 percent in the past 10 years, IDH purchases only by 57 percent. The GDR has therefore lost nearly 40 percent of its market share and has been reduced to 3.6 percent in 1984 (compared with 6.3 percent in 1970). The low price Asian countries, in particular, greatly improved their standing.(11) If the GDR had been able to maintain its share, it would have earned an additional 1 million VE in 1985.

In the consumer goods sector the GDR's advantages are evidently less and less able to allow it to keep pace with the threshold countries. The GDR exemption from customs duties, in particular, is no longer quite so significant in view of the reduced EC external customs tariffs (weighted EC external customs rate: 4.6 percent, though still about 12 percent for textiles and clothing). Furthermore, the preferential quota (12) for threshold countries amounts to 15 percent with respect to textile imports by the EC. The GDR is also bound to note that the continuing liberalization of the World Textile Agreement (WTA) decided upon when the WTA was recently extended, will even further exacerbate the pressure of competition on our market. No doubt the GDR had hitherto profited indirectly from WTA protection of the industrial countries.

It would be entirely wrong, though, to conclude the necessity for creating "new crutches" for purchases from the GDR (in this context, Lambrecht proposed to increase the turnover tax reduction for purchases from the GDR from 11 percent to 14 percent).(13) No doubt the GDR's advantages in IDH have to some extent provided it with a competitive standing that it would not have enjoyed without IDH. As a consequence, while other countries were compelled to adjust to our market, the GDR missed the boat because it was protected by its "advantages" and did not feel the need for such adjustments.

The Need for GDR Action

To stem further losses in their competitive standing, the GDR would have to act on three levels:

-- Modernization of its mechanical equipment for consumer goods manufacture;

-- Improved quality and faster adaptation to changing market conditions;

-- More aggressive marketing.

Modernization of the Consumer Goods Industry

A DIW expert opinion concluded last year that GDR investment policy had neglected the consumer goods industries.(14) The weight of investment spending on the consumer industries has dropped. In recent years, for example,

the share of light industry and the textile industry has declined investments in the light and textile industries fell from 6 percent to 5 percent of total investments (the base amount had been on the low side as it was). Like the other CEMA countries, the GDR had created a production structure that clearly assigned priority to capital goods industries. Modernization investments are urgently needed in particular in sectors of the consumer goods industry of special importance in IDH, such as textiles and clothing, lumber processing and electrical engineering products. The degree of automation and, consequently, of productivity appears quite insufficient. The in-house construction of rationalization aids, though touted with much fanfare, has so far been fairly unsuccessful and indeed appears to be no more than a means to obfuscate the shortage of investment resources. In the meantime this has resulted in the above mentioned external trade problems--and not only for the GDR.

To be sure, we note some promising beginnings: The GDR's investment policy in the coming 5-year plan appears somewhat more expansive, and the consumer goods sector is to be better served. Another hopeful sign is the GDR's emphasis on textile machines in its latest capital goods purchases from the FRG. This trend ought to continue--strengthened and expanded to other consumer goods sectors.

Improvement of Product Quality

Modern manufacturing equipment is a basic prerequisite but only one element of successful sales. The GDR itself now appreciates that its product quality is often inadequate to demands and consumer habits on Western markets. Standard and mass merchandise, the uniformity of the offer, narrow commodity ranges and, in part, so-called stock merchandise govern our image of GDR products. Complaints are increasing about insufficient or unduly slow adjustment to market trends, poor design, unduly narrow ranges of materials and colors, poor processing and delivery delays. At a seminar with combine managers last March, Politburo member G. Mittag minced no words: It was not enough, he said, "to create quantitative prerequisites for safeguarding exports," needed "above all (were) qualitative changes."

We must hope that such appeals, though nothing new, will be listened to and implemented. Still, doubts remain: The GDR's planning system cpontinues to lack any proper price-quality element for its fulfillment accounts. Conflicts of interest between foreign trade and production enterprises frequently fail to be resolved. It is therefore quite possible that combine managers with their narrowed production-technical vision may still "prefer" easy exports to the Soviet Union to tackling the challenges of Western markets. At the same time it is to be feared that there will always be combine directors or AHB [foreign trade enterprise] general directors who instruct their customers or representatives in the FRG that next year's plan should be fulfilled by a 10 percent rise in the sale of GDR products. Objections to the effect that the addressees were quite willing to do so but that the market requires better quality and fashionable products are dismissed with the remark that the customer has no part in product design.

Active Marketing

Marketing, in other words knowledge of the market and the active pursuit of sales, continues to be a foreign language for most GDR enterprises--unfortunately including many foreign trade enterprises. This may arise from the fact that most AHB directors originate with the production sector. In general there are no close and direct contacts with Western customers. On the other hand, constant market observation and the respective feed-back to the production enterprises are indispensable in view of the dynamism of Western markets. All those in responsible positions should review their policies in answer to the complaints that the GDR is far too slow to respond to customer wishes or changes in the demand, and that no proper marketing occurs. Nobody now can dispense with creation of a product and trademark image or with advertising. Packaging is part and parcel of selling. Delivering GDR products from their negative image should be a priority of any marketing concept. Unfortunately--and sometimes certainly unjustly--no positive response is elicited by the GDR as country of origin. Another feature of this fairly dismal picture is the fact that the GDR has so far offered only anonymous merchandise. In the clothing sector, to cite only one example, the customer nowadays tends to go for name brands. The GDR should probably follow the suggestion of asking an established FRG market research or advertising agency to elaborate a "campaign." In any case, price is no longer operative as the sole trade parameter. Moreover, the very one-sided sales structure involving many department stores and mail order firms represents a decided limitation: The specialized retail trade with its customer potential has so far not been reached at all.

Intensification of Enterprise Cooperation

Action is urgently needed in the three areas described--equipment, quality and marketing if greater losses of market shares to the threshold countries are to be prevented. We must assume considerable system-inherent friction to arise in the course of the adjustment of the last two headings. However, greater use of enterprise cooperation in all three areas simultaneously might yield important advances. According to ECE data, the GDR is the European CEMA country with the lowest incidence of cooperation agreements with Western countries (GDR: 4.4 percent. By comparison the USSR boasts 29.9 percent, Hungary 36.4 percent, Poland 11.4 percent, the CSSR 8.4 percent, Bulgaria 5.5 percent, Romania 4.5 percent).(15) The GDR figure is even less impressive when we consider that almost 50 percent is accounted for by compensation transactions (in this case plant purchases paid by the products of the plant), and that Western definitions hardly acknowledge such transactions in terms of cooperation. It is also not exactly encouraging to note that only just 8 percent of all GDR cooperations with the West involve the consumer goods sector.

The GDR should remove all still persisting obstacles as quickly as possible and utilize every kind of enterprise cooperation, beginning with simple bonded processing trade, the provision of machinery by major customers, joint research and development, license and know how exchanges, specialization agreements, sales cooperations, consulting and service cooperations up to and including highly complex common projects extending to all spheres. Third

country cooperations of course represent a special case in this account, and their importance should not be overestimated.

Some recent projects are encouraging, because they demonstrate that successful cooperation is possible and profitable for both parties. In the consumer goods sector we have the excellent "Salamander" example in the footwear industry.(16) As the result of cooperation with the GDR, Salamander is currently realizing a turnover volume of probably well above 300 million VE. Another satisfactory project is operating in the sector of wallpaper manufacture. It is to be hoped that the negotiations in the clothing sector will soon be concluded with a concrete agreement. The same also applies to various technical consumer goods.

Leasing--A New Possibility

A possibly promising sector of cooperation--leasing--has so far been entirely neglected. And yet, the share of leasing in total business gross fixed asset investments in the FRG amounted to 8 percent in 1985.(17)

It is common knowledge that a substantial leasing business is carried on between Austria and Hungary. Leasing has more than the advantage that it may serve to soften the problems produced by the shortage of investment resources. So-called operating-leasing (manufacturers' leasing) combines the benefits of the rapid usefulness of the most modern equipment and the simultaneous availability of the necessary know how.

The Salamander example demonstrates two essential principles of enterprise cooperation: Durability and reciprocity. Our firms must be fully aware that part of the cooperation agreements--sales--is going ultimately to be realized mainly on our market. Without the corresponding readiness to accept products from the GDR (if need be by marketing goods that have nothing whatever to do with the actual cooperation project--as is the case for Salamander), the chances of realization with the GDR are slim indeed.

It would therefore be useful if people in the FRG were to reflect whether and in how far enterprise cooperation might be encouraged by purchases in sensitive sectors and arising from joint projects being dealt with preferentially by special quotas or exemption from existing monetary or quantitative restrictions--similar to the special cooperation quotas now in place vis-a-vis some other state trading countries.

Quota Policy No Obstacle

However, such reflections should not be interpreted as meaning that the existing quota policy is too restrictive. Admittedly, the GDR often complains (Honecker's DIE ZEIT interview being the latest example) that the numerous restrictions in IDH hamper the sales opportunities of the GDR and, therefore, the potential development of IDH. Such statements do not hold up upon objective consideration (they are probably to be regarded as assertions intended to excuse GDR delivery weaknesses). The Federal Government's attitude clearly points to its wish in future also to encourage and expand IDH and is concretely reflected in a basically liberal trade policy.

Only a few commodity sectors are subject to monetary or quantitative restrictions in IDH. Such restrictions mainly apply to the farm sector, and even the GDR is bound to acknowledge that the Federal Government must take the EC into consideration--not least to avoid unnecessary discussions with the EC partners about the special status of its trade with the GDR. Excepting oil purchases that have a special status, only 6.3 percent of effective purchases in the industrial sector were subject to quotas last year. No more than 1 percent of commodity headings is still subject to monetary or quantitative restrictions. Though the GDR complains bitterly about obstacles to its sales of textile and clothing products, most subheadings in this persistently sensitive sector have been liberalized. Only one sixth of the purchase volume somewhat in excess of 1 billion VE is subject to quotas. Substantial increases in quotas and many liberalizations have occurred especially last year and in 1986. Of course our quota policy needs to be constantly reviewed, and long-standing arrangements must be more severely scrutinized. Quotas are bound to arouse criticism if they have remained unchanged for many years or involve sectors where the share of purchases in domestic production is barely noticeable. Admittedly, quotas account for only part of reality: We now have more refined types of restriction such as agreements on quantity, voluntary self-restriction and orientation dimensions, and these have not bypassed IDH. They may be justifiable if temporary and aimed at easing temporary problems but may not go too far. We also must admit that some people in business and politics still aspire to "use" the Federal Government's responsibility and its tools. In theory the IDH still operates as a ban with a provision for granting exemptions and therefore offers a recurrent temptation to in fact interfere in trade. Lately, though, the political decisionmakers have demonstrated greater powers of resistance (for example with regard to the issue of construction workers from the GDR). In this meaning the "flexibility" (18) called for with regard to the quota policy is "on track."

On the other hand this type of free trade also means that the GDR must stick to the rules of fair competition on our market. Price scopes must be exploited as much as possible. Complaints about dumping or price inspection proceedings merely arouse disquiet among customers and ultimately interrupt the smooth development of trade. Considered from the aspect of several years, including the future, continuity is precisely the dimension of value to be cultivated.

Frank Discussion of Criticisms

The "founding fathers" of IDH are now leaving the scene of action. They certainly had to cope with a lot of problems that bore strong political connotations. Indifference if not hostility to this trade caused many difficulties for the "pioneers." Without their persistence it would not have advanced to the extent it did. At the present time we can give it much more sober consideration. It is stable, and purely business elements have come to the fore. This also implies that the participants are able to go in for factual analyses and state and discuss weaknesses or points of criticism--without fearful sideways glances. Such discussions should not be negatively judged by the "concerned party." Indeed the contrary holds true: The chairman of the "study group on trade with the GDR" did so on the occasion of

the Leipzig Spring Fair; other propagators of this trade should follow suit. That, too, is a part of the emancipation that is bound to ultimately benefit trade.

FOOTNOTES

1. See, for example, German Institute for Economic Research (DIW), WOCHENBERICHT No 20/1978, 18 May 1978, "Few Opportunities for the Development of Inner German Trade." Also DIW WOCHENBERICHT No 12/1981, 18 March 1981, "Inner German Trade. Narrowed Scope for Expansion." Also H.D.Schulz, "Trial Balloon in Leipzig," in DEUTSCHLAND ARCHIV No 12 (1979), pp 341ff.

2. See F.Roesch,F.Homann: "Thirty Years of the Berlin Agreement--Thirty Years of Inner German Trade: Economic and Political Dimensions," ZEITSCHRIFT FUER DIE GESAME STAATSWIRTSCHAFT, No 137 (1981), pp 525f.

3. In the final analysis the GDR can buy from us only the equivalent of what it is able to sell to us. The interest free overdraft (swing) hardly changes that fact; by comparison with earlier years (10.6 percent in 1975, for example) it now stands at 3.6 percent of 1985, and its importance in terms of trade policy has declined considerably. Swing has lost its credit function and largely regained its original technical function of maintaining friction free cleaing.

4. Admittedly, a substantial part of the investments (25 percent) is taken up by the unproductive energy sector. Chernobyl might well strengthen this trend, with the corresponding adverse consequences for the other sectors of the national economy.

5. The recovery did more than restore the status quo. Probably due to political-psychological considerations, the GDR has now accumulated relatively extensive foreign exchange deposits at Western banks. According to the latest BIZ data, these deposits amounted to $6.52 billion at the end of 1985. In 1985 alone the GDR increased its deposits by about $2 billion. Given the simultaneous relatively high gross debts ($13.3 billion), such behavior is hardly explicable from the economic aspect and resulted in various speculations (payment obligations toward the USSR by reason of old debts, "aid to Poland," exaggerated precautions, liquidity fund for increased investment goods purchases in the current five-year plan period. It is a fact, though, that the GDR is giving away substantial amounts of money while burdened with relatively high gross debts ($13.3 billion).

6. Similar to its behavior vis-a-vis the other Western countries, the GDR took care in IDH also not to allow a "threat potential" to possibly develop as the result of debts. Bilateral debts achieved a climax at the end of the 1970's at more than DM/VE 4 billion net. It was sharply reduced though trade exchanges showed a large increase (end 1985: DM/VE 3.5 billion). In addition, due to its low utilization of the swing (currently about 200 million VE, though the amount of 850 million VE was agreed), the GDR has acquired a liquidity cushion in IDH, too.

6a. See, for example, the statements by the deputy government spokesman to the Federal Press Conference on 28 July 1986.

7. See, for example, Honecker's interview in DIE ZEIT of 31 January 1986, reprinted in DEUTSCHLAND ARCHIV, No 3/.1986, pp 312ff.

8. See also and above all the still valid explanations by S.Kupper and S.Lambrecht, "GDR Benefits from Inner German Trade," DEUTSCHLAND ARCHIV No 11 (1977), pp 1204ff.

9. These figures are based on the conversion of IDH to U.S.dollars. We must therefore take into account the dollar's rate of exchange, risen by about 60 percent in 1980-1985 and therefore exaggerating the value of IDH. On the other hand we note that the major part of the GDR's trade with other Western countries is not settled in dollars either but in the respective currencies, so that these figures reflect identically weighted effects.

10. The GDR's losses of revenue due to the oil price development are relatively low in IDH by comparison with the GDR's other trade with the West. The GDR is one of the biggest oil and oil product exporters among the world's non-oil countries. Considering the above mentioned price drops, this might result in the loss of GDR foreign exchange earnings ranging from $1-1.5 billion (based on a DIW estimate, according to which the GDR recorded $3 billion gross earnings from 1984 sales of crude oil and oil products, including an extensive transit trade.--See DIW WOCHENBERICHT No 51-52/1985, 20 December 1985, "The GDR's Primary Energy Consumption and Its Structure," p 579)

11. See DIW WOCHENBERICHT No 10/1986, 6 March 1986, "Inner German Trade: Continuity Needed," pp 125f. This loss of market shares is not specific to IDH, it applies to the Western trade of all CEMA countries. See a hitherto unpublished study by Lloyds Bank, Ivor Coffin, "East European Debt Problems and Prospects for Trade with the Developed West."

12. Share of preferentially treated imports in imports subject to the EC's General System of Preferences.

13. See H.Lambrecht, "Trade with the GDR Confronting a New Boom?", INDUSTRIE- UND HANDELSREVUE, No 2/1985, p 22.

14. See DIW, "Konsumgueterversorgung in der DDR und Wechselwirkungen zum Innerdeutschen Handel" [Consumer Goods Supplies in the GDR and Interactions with Inner German Trade], Berlin 1985, p 302.

15. See ECE, "Promotion of Trade Through Industrial Cooperation," Trade/R 503/Add. 1, 15 November 1986.

16. See a lecture by the chairman of the board of Salamander AG at a conference of the Handelsverein E.V. in Bonn on 16 January 1986.

17. See Arno Staedtler, "Good Growth Prospects for the Leasing Trade," supplement to SUEEDDEUTSCHE ZEITUNG No 83, 23 April 1986, p 1.

18. See DIW WOCHENBERICHT No 10/1986, as before, p 178.

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INCREASED AGRICULTURAL EFFICIENCY PROCEDURES OUTLINED

East Berlin EINHEIT in German Vol 41 No 11, Nov 86 (signed to press 14 Oct 86) pp 2010-2015

[Article by Prof Dr Karl-Heinz Struebing, director of the Institute for Socialist Management at the Academy for Agricultural Sciences of the GDR: "Requirements for Greatly Increased Efficiency in the LPG's and State Farms"]

[Text] In preparation of the Thirteenth GDR Farmers' Congress, cooperative farmers and rural workers are directing their many competition initiatives to the assurance of stable and steadily improving supplies of high quality foodstuffs for the public and agricultural raw materials for industry, to a growing contribution to the national income and the further improvement of working and living conditions in the village. The ten key points of our economic strategy, decided at the Eleventh SED Congress, represent their guideline. These call for our orienting ourselves completely to the qualitative factors of economic growth, especially the application of scientific-technological progress, and for consistently using socialist management science, utilizing and further developing the knowledge and skills, the wealth of experiences of all those working on the land. Increasing success in the endeavor to handle the standardized agricultural reproduction process is recorded wherever we encounter a fighting atmosphere geared to rising hectare yields and livestock results, to the greatest possible economy in the use of materials, energy and capital equipment as well as growing product quality, wherever accurate measurements and calculations are carried out daily, wherever the counsel of cooperative farmers and workers, their training, experiences and initiatives are valued and sensible management serves to develop the substantial material and intellectual potentials of LPG's and VEG's [state farms].

Performance Growth From Scientific-Technological Advances

At the present time it is quite obvious that scientific-=technological progress, combined with farming experience, represents the decisive factor for the growth of economic performance in the countryside. Progressive LPG's and VEG's such as the Bentzin Crop Production LPG in Kreis Demmin, the Derbach LPG Livestock Production LPG in Kreis Zschopau, the Schwaneberg Crop Production VEG in Kreis Wanzleben are guided by this principle. They focus their political work and management efforts on the utilization of scientific-

technological advances, in particular the research results of microelectronics and biotechnology, that are applicable at the present time.

When we compare the results of cooperatives and state farms that widely introduce scientific-technological advances with the average results recorded in the past 5 years, we note that their farm product as well as their net product are substantially above average with regard to both crop and livestock production. Their higher hectare yields and livestock performances are achieved with a considerably lower specific production consumption. It is typical for these LPG's and VEG's that they ensure a high scientific-technological standard throughout all sectors of the production process. They coordinate the necessary managerial measures related to mechanization, chemicalization, soil improvement, the efficient utilization of biological potentials and perceptions, storage and preservation; they also fully and efficiently use the land, that main means of production of agriculture. Their achievement of a speedy application of scientific-technological advances is due to the following factors:

-- These LPG's, VEG's and their cooperations increasingly work in accordance with a long-range conception for the application of scientific-technological advances. They smoothly combine the plan of the measures of science and technology with targets in other plan parts.

-- The managers are familiar with the top scientific-technological standards in their field, take the lead in their application and manage with an eye to the future.

-- Managers and production collectives cooperate in learning how to handle science and technology. Training is oriented as planned to the requirements of the years to come.

-- The strength of the cooperation is used to help scientific-technological advances to break through all along the line.

-- Science and production are linked closely also by virtue of the fact that the results of production experiments and the experiences of the central consultation enterprises are used for in-house efforts, and that research and transfer are contractually safeguarded.

-- The measures of scientific-technological progress are planned down to the brigade, the field and the barn. Concrete tasks arising from the plan science and technology are assigned the innovators and young people--specially within the framework of the MMM [fair of the masters of tomorrow] movement. Study groups or sections for science and technology assist the LPG executive board or VEG director in the planning, settlement and supervision of the measures of scientific-technological progress and ensure early and job related information.

Field-related top yield conceptions and barn-related top performance conceptions have proved to be excellent management tools and a basis for the work of the production collectives. These conceptions set out the latest findings of science and technology, the cultivation and livestock measures to

be used where, at what time and in what manner. They yield the quality aimed for if they agree with the targets and measures of the long-range development conception of the LPG's, VEG's and their cooperations and are used for production preparation, the operational control of production, the analysis of production, the perfection of enterprise production processes as well as for enterprise planning, the conduct of the socialist competition, the performance comparison and economic stimulation.

Top performance conceptions provide the basis for the work of the majority of barn collectives in livestock production enterprises. They help apply scientific-technological advances as related to the particular objective in order to better exploit the performance potential of the livestock, raise the feeding results, lower specific feed costs and, by rationalization and modernization, improve production and working conditions. Without the purposeful drafting and use of top yield conceptions it would not have been possible to realize the satisfactory livestock performances of recent years. These successes convinced and promoted confidence, optimism and new initiatives directed to better coordinate top yield and top performance conceptions.

The increased use of microelectronics, biotechnology and their basic techniques gives rise to constantly new bases for production, the automation of many jobs. The conditions and the content of work are changing. As many as 120 fully applicable results of microelectronics and biotechnology were introduced at this year's "agra" [agricultural exhibition]. They included computer assisted programs for land and stock handling, production controls for dairy production, glasshouse production, the irrigation of farm crops, surveillance of various pests and diverse biotechnological processes such as in vitro culture for the mass multiplication of plants and the method of embryo transfer to speed up breeding in beef cattle production.

The use of modern computer equipment lifts the work on field-related top yield conceptions and barn-related top performance conceptions to a qualitatively new level. In crop production, for example, optimum decisionmaking proposals are worked out with the help of microcomputers on the basis of basic local data, soil fertility indicators, weather information, crop parameters as well as data on weed and pest infestation. It is subsequently possible far better than hitherto to exploit natural forces and natural conditions for the benefit of rising yields and declining costs per product unit. First results and practical experiences of computer assisted farm management are available in particular from cooperations of LPG's and VEG's in Leipzig, Erfurt, Karl-Marx-Stadt and Gera districts. Jobs with computer backing are being created in socialist cooperation for technologists of crop production, specialists in feed management and farm managers. Many programs for using microcomputers for planning, organization and accounting are being drawn up and tested. In future years these computer backed jobs will guarantee a steady flow of data from preparations through implementation to the conclusion of the production processes. They will make it possible to work in accordance with job-related programs combining the latest natural science, technical, technological and economic findings and the experiences of the best. The knowledge and experiences of managers and collectives influence farm management methopds by way of the dialogue with the computer. Computer backed jobs increase

adaptability to assigned or new conditions and ultimately raise labor productivity. The use of the software package for specialists in feed management, for example, renders possible productivity increases by 150-180 percent.

The microcomputer programs available for planning, organization and accounting have the advantage that they can be used at any time, and that the results are immediately at the disposal of managers and collectives. Programs for materials, manpower and financial accounting, for example, facilitate custom made daily operational bookkeeping and statistics as well as planned and actual result comparisons at any time for the enterprise as a whole, its brigades and departments.

At the same time these first examples also teach us that microcomputer equipment confronts the knowledge and capacity of managers and collectives with entirely new challenges. They begin with the definition of the fields of application for microcomputer equipment, the choice of computer and its basic software, includes the reorganization of work processes, program adaptations, the assurance of the availability of the software and hardware as well as differentiated training. The use of microelectronics and the modern computer equipment arising on its basis require thorough political-ideological and economic-organizational preparation. This cannot begin too early. The executive boards of LPG's or directors of VEG's are responsible for it. The establishment of a temporary study group on the preparation of the use of decentralized microcomputer equipment is likely to offer valuable help, if the group closely cooperates with the respective user communities.

Actually there is no limit to the use of microcomputer equipment in the entire enterprise reproduction process. However, the sequence of applications should always be decided by exact efficiency criteria. In direct connection with this principle we need to know just what tasks may most usefully be handled by what computer. The sensible combination of enterprise and process related microcomputers and basic computers, linked to large-size computers, and the creation of an appropriate data network is best able to take account of present and future national and enterprise needs.

None of these tasks are merely technical-organizational matters. Needed for their handling are clear political attitudes, knowledge of the interaction between scientific-technological and social progress, a fighting commitment in opposition to inertness with regard to the acceptance of the new and constant readiness for one's own continuing training.

Cooperation Releases New Motivating Forces

Cooperation has already given an enormous push to economic and social development in agriculture. For cooperative farmers and workers, cooperation continues to be the most intelligible and comprehensible approach to further social development, because it best corresponds to the thoughts and actions of farmers and creates favorable conditions for comprehensive intensification. It will help to further develop the potentials of cooperative property and assure the long-term cooperation of cooperative and national property. It is therefore crucial to deepen this cooperation after the Eleventh SED Party

Congress, thoroughly to discuss all issues involved in common efforts with the cooperative farmers and workers and to be able to qualitatively better handle cooperation. The work of the cooperation councils represents a key factor in this connection.

Following resolutions by the plenary meetings of their LPG's or decisions by the director of the VEG, all cooperation have now been assigned economy managing functions so as to even better cope with the standardized reproduction process of crop and livestock production. Practical experiences have confirmed that cooperation councils should gradually be assigned the appropriate tasks and powers. They include the breakdown of the plan tasks or targets issued by the kreis council to the LPG's and VEG's, the coordination of plan implementation and the organization of the joint competition, the evaluation of the fulfillment of the cooperation plan and the joint competition. These in turn include the enforcement of joint measures of scientific-technological advances, the achievement of balanced basic proportions between crop and livestock production, the coordination of the manpower and resources including the necessary socialist assistance and, not least, the coordination of enterprise management regulations and investments.

It has been proven correct to elect chairman of the cooperation council the politically and technically most experienced LPG chairman or VEG director whose enterprise boasts stable production bases and a strong management collective. LPG's nd VEG's are emphatic that many cooperative farmers and workers from the production collectives need to be represented in the cooperation council. This helps the work of the cooperation council to become the concern of all, its decisions are well founded, and resolutions quickly taken to the work collectives for application in production. The same applies to the work of the committees. They turn out to be effective if assigned concrete tasks within the framework of the cooperation council's work schedule, if they precisely account to the cooperation council and closely cooperate with the committees of the LPG executive board.

The successful operation of the cooperation councils requires long-range conceptual work. This is demonstrated by such cooperations as Brahmenau, Kreis Gera-Land, Oehna, Kreis Jueterbog, Redefin, Kreis Hagenow. They have been working with long-range development conceptions for many years. These conceptions are being revised on the basis of the 5-year plan indicators of kreis councils for the period 1986-1990. Economic and social development has been planned through 1990 and beyond for each LPG, VEG, cooperative facility and cooperation as a whole. Weak points are being analyzed and intensification key points determined. These conceptions serve the scientific underpinning of enterprise plans and, as experiences show, need to be regularly and precisely defined in accordance with national requirements. To assist the long-range conceptual efforts of cooperation councils, the Institute for Socialist Management at the Academy for Agricultural Sciences in cooperation with the Scientific-Technological Center (WTZ) at Leipzig-Markkleeberg, made available a model for the optimalization of the structure of crop and livestock production. This enables the cooperative farmers and workers to work out several variants of optimum management solutions for decisionmaking preparations with only 75 initial data. The model focuses on performance growth in crop and livestock production, the organization of

efficient micro-regional cultivation structures, the dimension and structure of livestock holdings, feed production and the balancing of requirements and yields of feed and reproduction-effective organic substances as well as the calculation of the efficiency of production (proceeds, costs and profits).

Feed management is central to the work of the cooperation councils. After all, feed represents 65-70 percent of gross crop products. Its share in the total cost of livestock production amounts to 40-50 percent. The type of organization of feed management adopted allows us to assess the maturity of cooperation between crop cultivators and livestock producers. It demonstrates the extent to which a sense of responsibility for the whole determines action. Satisfactory advances in feed management were recorded in recent years. This is reflected in the increasing in-enterprise feed supplies for livestock holdings and the declining specific feed costs. In-enterprise feed production grew by 15 percent from the 1976-1980 to the 1981-1985 period. Food costs per unit in-enterprise product of livestock production have been reduced by an average of 1 percent per annum since 1981. All that improves profits.

What is it that distinguishes the top cooperations of LPG's and VEG's? Consonant with national needs they cultivate at their respective locations the highest yielding types of crops up to the crop sequence-related, labor managerial and nutrition physiological limit and, for crude fodder production, mainly use the absolute fodder area (meadows and pastures) as well as sugar beet leaves, feed straw and intercrops. They make sure of good quality crude fodder and feed concentrate, keep losses low on fields and pastures as well as from there to the feeding trough. They also develop all local feed reserves. Livestock holdings are fed good quality feed as needed in terms of volume and type. Good food utilization by all types of livestock produces a favorable ratio of feed used to the end product. The best possible feeding results and low livestock losses are guaranteed. The planning, balancing, accounting and economic stimulation of feed management proceed on a scientific foundation.

Agreed prices exert a lasting influence on the organization of feed management and, consequently, on cooperation relations. They are at their most effective if--as confirmed by the experiences of the cooperations Drebach, Kreis Zschopau, Zschortau, Kreis Delitzsch, Grumbach=-Kaufbach, Kreis Freital, and others--they are calculated on the basis of challenging and jointly worked out targets for hectare yields and livestock performances as well as appropriate costs. They are effective if they equitably reflect the value relations between grain and crude feed, noticeably affect feed quality; and if organic substances are properly recorded as to volume and quality, correctly valued and accounted.

Recent years have supplied ample proof that it is possible with the aid of the cooperations to get the better of unjustified performance differences among LPG's and VEG's. Common efforts encourage every cooperation partner to think in terms of the economy. In constant exchanges of experience, these efforts inspire the partners to make the results of the best the criterion of their own work. Guided by the SED district and kreis leadership organizations, enterprises, cooperation partners, kreis and village councils, the FDJ, the VdgB [peasants mutual aid association] and other social forces as well as scientific establishments have done much to get rid of unwarranted

differences. Of course this does not mean that we may slacken our efforts for the continuing removal of these differences, because this represents a substantial reserve for further performance growth.

What is it that distinguishes the best? They have geared their entire management methods to the requirements of comprehensive intensification, specially the utilization of scientific-technological advances, and encourage the initiatives and creative powers of cooperative farmers and workers. They devote the utmost attention to the reconstruction and rationalization of decisive capital equipment, the careful servicing and maintenance of equipment. They operate with a view to the whole and, at the same time, keep an eye on details. Their management operations are increasingly concerned with such aspects as complexity, detailed attention to the land, crops, the livestock, optimalization, the long view and flexibility. They develop intensive cooperation among cooperative farmers and workers, scientists and the personnel of state and economy managing organs. These LPG's and VEG's boast stable management collectives; their managers are politically and technically skilled, enjoy excellent knowledge of their profession, the personnel and the location, and they are holding their jobs for long periods. Cooperative farmers and workers are extensively involved in the management and planning of the brigades, enterprise departments and cooperation relations. Plenary meetings and executive board sessions are held regularly, and the energetic work of the committees is guaranteed. Their output and work is organized in an exemplary fashion and, in conformity with national requirements, their production orientation is optimally coordinated with natural production conditions. These collectives have their own plan, their own competition programs, assigned areas of cultivation or livestock holdings, and their results are regularly reported.

The use of the principles of scientific labor organization ensures that all work is carried out at the proper time and at the best possible quality, in conformity with the rhythm of production and labor in field cultivation and livestock management.

The application of the performance principle enjoys due attention in these LPG's and VEG's. Beginning with the planning stage, they achieve the direct connection between the volume of output and efficiency on the one hand and of remuneration and premium payments on the other. This is done by, for example, linking part of the remuneration of managers to the fulfillment of qualitative indicators such as hectare yields, livestock performance, farm output, net output, cost ratio and profit. The best LPG's and VEG's demonstrate a high standard in long-range annual and operational planning, work with long-range development conceptions for their cooperation and therefrom derive their targets. They break down enterprise plans to brigades and conduct regular accounting. In particular they insist on closely linking production and the region, develop and organize the villages as the homesteads of cooperative farmers and workers.

The implementation of the economic strategy in the countryside requires every LPG and VEG everywhere to work according to these principles and make them the guidelines of their operations.

11698
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FUTURE INDUSTRIAL ECONOMISTS TRAINED TO DEVELOP SOFTWARE

East Berlin PRESSE-INFORMATIONEN in German No 125, 28 Oct 86 p 2

[Interview with Prof Dr Gerhard Engel, Deputy to the Minister for University and Technical School Affairs: "Step-by-step Restructuring of Education and Continued Training of Engineers and Economists"]

[Text] [Question] What are the social goals of revamping the education and continued training of engineers and economists?

[Answer] These two professional groups, which are trained at institutions of higher learning and are important to our economy, must receive an education that meets the future requirements of our scientific-technolo gical revolution in that it makes full use of the advantages of socialism and the broad economic and social application of the latest scientific and technological findings.

It is important to develop and strengthen the students' willingness and ability to work, with a high degree of effectiveness, on achieving the goals of the 11th SED Party Congress. Toward this end, theoretical and practical solutions must be found to our new political, economic, social, ideological and intellectual-cultural tasks. This is the reason why the objectives, contents and methods of our training are being redesigned in a more differentiating way and at a qualitatively higher level and why the relationship between training in fundamentals, theory and methodology and the acquisition of specialized knowledge is being revamped. The studies will be designed in a way that requires and promotes more than before productive, creative work and thinking on the part of our students and emphasizes their ability to pursue independent scientific efforts.

[Question] What basically are the new characteristics of the study programs that went into effect at the beginning of this academic year for the fields of economic specialization?

[Answer] I would like to stress that we will continue to adhere strictly to the uniform training of all students in marxist-leninist principles. More emphasis than before is placed on practical and subject-related contents. Uniform training in economic principles within the various fields of specialization as well as the transition to complex subject areas is being overhauled. The aim is greater integration of the various subject areas. In all economic areas, basic education in informatics, including training

in dialogue-oriented work, starts with computers. Up to 15 percent of all economics students are receiving special training in this area; hence they will be able to develop software among other things. Entirely new is the establishment of the special technical field of economic informatics, where graduates are trained to work as specialists for the design of data bank systems, computer networks and complex software solutions in various economic management areas.

The education of engineering economists will also acquire an entirely new profile. In their work, technical and economic knowledge must be closely linked. Their studies now include an equal proportion of training in mathematics, natural sciences, technologies and economics. While studyingin school, they will already work with engineers.

Many changes relate to more practical training and exercises and to changes in the way of teaching. There will be less required courses in favor of a larger number of optional classes that will be offered. Changes will also be made to perfect the training in a methodical-didactic way. In this respect, we will benefit from the good experiences we have had with the economic education offered by technical schools in the past.

[Question] Which steps will be taken next?

[Answer] In every subject area, the collaboration between practice and science must be strengthened in order to meet our requirements of the future. In this process, the science advisors of the Ministry for University and Technical School Affairs, in consultation with central government agencies and combines, are going to develop the study programs.

As soon as we have gained experience with new study elements that merit general application--such as those tested at the Commercial College in Leipzig in the area of domestic trade economics, at the Karl-Marx-University in Leipzig in the area of accounting and statistics and at the College for Engineers in Zittau in the area of enginering economics--we will turn to redesigning our study programs for the basic direction of economic studies. They will be the basis of new training programs; therefore, good coordination of the course contents in the various areas is very important in order to maximize effectiveness, while optimizing the integration of the transfer of knowledge.

Based on these new programs, which are being designed jointly by the production and academic sectors, all technical and economic studies at our institutions of higher learning will be adapted over the coming years on a step-by-step basis to the new requirements, and new training programs for technicians and economists at our technical schools will be introduced.

[Question] How, and where, will the graduates of the new field of specialization be employed?

[Answer] Technicians and economists graduating from these newly created and currently tested special study areas at our technical schools will then have the opportunity to work on interesting business management issues, primarily

in industry. There they will work partly in traditional, and partly in new professions that are crucially important to the introduction and application of key technologies.

As a rule, the students are graduates of the 10-year polytechnical highschool; young skilled workers will be trained in a different way to become technicians and economists.

7821
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DOMESTIC, SECONDARY MINERAL RESOURCES AID METALLURGICAL SECTOR

East Berlin PRESSE-INFORMATIONEN in German No 126, 30 Oct 86 p 4

[Article by Dr Fritz Geiger, Division Chief, Ministry for Ore Mining, Metallurgy and Potash: "New Ways of Refining Domestic Mineral Resources"]

[Text] Previously, aluminum was produced exclusively from imported bauxite. Particularly in the electrotechnical industry, in engineering and shipbuilding as well as in the light-metal construction industry, aluminum is used for many purposes. In different chemical combinations and with a lower content, it is also present in domestic clays and sands, but it is very expensive to produce aluminum from them. A collective of the Freiberg Research Institute for Nonferrous Metals of the VEB Mansfeld Combine Wilhelm Pieck has now been able to develop an efficient process for the production of aluminum from domestic nonbauxite clays.

This accomplishment was preceded by lengthy laboratory experiments and tests. Today. the VEB Aluminum Plant "Albert Zimmermann" at Lauta manufactures aluminum oxide from hydrochloric acid in a large technical research facility and sends it to electrolytic furnaces to be melted into aluminum. It is then processed into specific semi-finished aluminum products, such as fine and extra-fine wire as well as into extruded aluminum and aluminum-alloyed components. One of the remarkable features of this new technological process is that all resulting by-products can be used in the domestic economy. For instance in agriculture, hydrochloric acid and silicate residues are used for the production of fertilizer: in the cement industry, they are used as additives, and as raw material for the manufacture of so-called light-weight bricks and light-density high-quality insulating building materials. The VEB Mansfeld Combine Wilhelm Pieck has developed a process that includes some 30 patents and patent applications, here and abroad, and is a top-notch technology with international standing.

To increase the use of domestic raw materials, comprehensive research and development work has been initiated under the auspices of the Ministry of Ore Mining, Metallurgy and Potash. In these efforts, scientists, technicians and technologists are working together to improve the exploitation of minerals and secondary mineral resources through complex processing.

For instance secondary mineral resources are the most important domestic raw material basis of the GDR metallurgical sector. They provide the resources

for more than 65 percent of its crude steel production. For that reason, the more complete and intensive utilization of secondary mineral resources is one of the key prerequisites for meeting the economic strategy of the GDR.

Improved processing depends primarily on qualitative factors. It is the responsibility of the workers in our steel and iron works to ensure the complete utilization of all alloys in steel scrap, such as chromium, nickel, molybdenum, wolfram vanadium and cobalt. That requires that scrap is processed in line with alloy-related technical considerations. Hence new ways have been developed to achieve the optimal utilization of the alloys contained in low-grade scrap.

In recent years, processing alloyed steel scrap with the aid of computerized sorting belts has yielded significant primary alloy savings. The VEB Refined Steel Works Collective at Freital employs this process for the production of alloyed steel goods via the so-called scrap remelting process, and in so doing, has been able to substitue ferrous alloy imports and alloy-containing materials, such as chromium and wolfram ores. Legal regulations encourage the increased production of sorted alloyed scrap in the collection centers. As a result, in 1985, an average of 485 kilograms of such steel scrap was used to produce one ton of alloyed steel.

The workers believe that the more intensive utilization of secondary resources for the production of potash is another important way to enhance the processing of domestic raw materials. Raw salts used for the production of potash fertilizers contain other useful substances, in addition to potassium. Efforts to improve the processing of previously neglected by-products have undergone significant acceleration. New processes make it possible to utilize even miniscule parts of such substances in raw salt. They include, in particular, magnesium chloride, kieserite, magnesium sulfate and bromide. Since it became necessary in recent years to shift to new deposits to mine potash, the share of magnesium chloride, for instance, has steadily risen.

With the help of chemical processes and through the partial or complete removal of water, it permits, among other things, the production of magnesium oxide binders as a basis for xylolith and artificial stones for construction purposes as well as for materials in the textile and paper industry and in the chemical sector. A key product is sintered magnesite of the highest purity. It is used, for instance, to manufacture fire-proof stones to line oxygen converters for making steel. Compared with conventional fire-proof materials, these stones have a considerably longer life in high-temperature processes.

7821
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BEZIRK-MANAGED COMBINES' 1881-85 CONSUMER GOODS PRODUCTION

East Berlin PRESSE-INFORMATIONEN in German No 127, 31 Oct 86 pp 2-3

[Interview with Dieter Koschella, State Secretary, Ministry for Bezirk-Managed Industry and Food Industry: "Government Makes Determined Effort to Strengthen Bezirk-Managed Combines"]

[Text] [Question] What have been the accomplishments over the past years of the Bezirk-managed [district-managed] industry as a traditional branch of the consumer goods industry in this area?

[Answer] Since the establishment of the combines, the creative and innovative efforts of the 140,000 workers in the approximately 800 enterprises of the Bezirk-managed industry have made increasingly larger contributions to the fulfilment of our main task in line with our economic and social policies. Thus the collective increased the production of consumer goods for the population and exports by M1.3 billion over the 5-year plan period from 1981-85.

This constitutes an increase of about 60 percent and is twice as large as that of our industrial production overall. Closely linked to this production growth is the accelerated replacement of production lines. The extent of the replacements in our consumer goods industry in this area improved from 19 percent in 1981 to 35 percent in 1985. These improvements in our production of consumer goods were expedited and supported by the efforts of the 20 product groups in the Bezirk-managed industry.

[Question] What share of this production growth is due to the wide-spread utilization of science and technology?

[Answer] Important prerequisites for these accomplishments of the Bezirk-managed combines have been the development of the combines' research and development capabilities and their utilizatioin for key products, the establishment of efficient combines, enterprises and divisions to manufacture rationalization products, and continued advances in the development of new products and technologies, especially in the introduction of key technologies. During the past five years, about 50 complex rationalization projects have become operational here. This made it possible for the consumer goods industry to achieve above average growth rates. For instance, the production of coffee

and tea machines rose by 382 percent during that period. Since 1980, the production of hotplates grew by 105 percent, of automatic toasters by 139 percent, camping furniture by 98 percent and living-room lamps by 72 percent.

The Bezirk managed combines continue to pursue with great determination this way toward complete rationalization in order to meet their target plans. For instance, at least 40 percent of all consumer goods must be replaced each year, and some 2,000 new products must be developed and put on the market by 1990.

[Question] For small and medium-sized enterprises as well, the increased utilization of key technologies is the most important way of boosting their production of goods that are in demand. What can you tell us about the first results of these efforts?

[Answer] Much has been done to raise the manufacture of industrial robots. During the 1981-85 period, the Bezirk managed combines built 796 industrial robots. By 1990, this number will increase threefold. Currently, more than 960 industrial robots are used in the Bezirk-managed industry.

We are also working for more progress by using CAD/CAM [computer-aided design and computer-aided manufacturing] systems in multiple shifts. Unlike in 1985, when we had only 46 work stations, this year, the Bezirk managed industry will operate 282 CAD, CAM or CAD/CAM systems. In the VEB Electrical Appliances Combine in Apolda, for instance, the establishment of five CAD/CAM work stations has made it possible to automate the production of electrical irons and frying pans.

In addition to using CAD/CAM technologies, Bezirk-managed combines which manufacture typical small and medium-scale products are designing and installing complex automation systems, including flexible automatic production sections. This is particularly true for the manufacture of garden tools, camping furniture, heaters for coal storage rooms, coffee and kitchen machines, other electrical household appliances as well as automobile trailers and vital economic supplies.

[Question] How about training workers in a timely fashion to use new technologies?

[Answer] New techniques and new technologies, particularly the broad introduction of key technologies, require the early and complex training of the workforce. That applies as much to the training of service personnel as it does to software specialists, maintenance and repair personnel as well as to managers. This puts new and high demands on the work of combine cadres and on our training and continued training facilities. Therefore, all existing opportunities in the territory must be utilized, besides those available in the combines.

In the Magdeburg district, we set up a training center within a short period of time with the assistance of the Economic Council and the Mechanization

VEB; in the Gera Bezirk, the facilities of the Friedrich Schiller University in Jena are being tapped to train workers.

[Question] In designing and introducing modern technological solutions, cooperation among the partners within the region has proven beneficial. How would you assess the results achieved so far and the status of such cooperation?

[Answer] In order to increase performance and efficiency in Bezirk-managed combines, it is very important to make available and utilize the rationalization capabilities of the entire territory and to closely work with scientific institutions, universities, colleges and technical schools. However, not everywhere are the available opportunities exhausted to the fullest extent and used for practical purposes. Especially those combines achieved high economic results which joined up with partners in their territory during the early development phase of modern technological solutions and which, with the help of tasking workbooks and related contracts, worked with them until the solutions could be transferred and applied. Assisted by the Friedrich Schiller University in Jena, the VEB Mechanical Engineering Product Combine in Zeulenroda, for instance, equips each year one or two production sections of the combine with modern technologies and moves step-by-step towards automated production.

[Question] What measures are the districts going to take to expand the scientific-technical potential and the production of rationalization equipment in the Bezirk-managed combines?

[Answer] We have taken numerous measures to boost the productive capacity of the rationalization goods industry and to set up mechanical engineering capabilities in the combines themselves, while establishing central production facilities for tools, microelectronic building elements and groups as well as ensuring high-quality supplies. Scientific-technical centers are formed for the various product groups in the leading combines.

All Bezirk-managed enterprises and combines of the rationalization goods industry- four more combines will be added to the existing ones during the next few years are in the process of creating the prerequisites for CAD/CAM jobs and of ensuring that the necessary software is being developed. A yet-to be-established application center for the most advanced technologies, including the application of laser and fiber-optic technologies, will enhance the development of technologies in Bezirk-managed combines. Because our experiences have been so favorable, training and continued training programs for cadres will be expanded in the combines as part of their adult education programs and in colleges and technical schools.

7821
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PAPER REPORTS ON ELECTRONIC FIRM'S FOREIGN EXPORTS

Bucharest REVISTA ECONOMICA in Romanian No 39, 26 Sep 86 pp 3-4

[Article by Ioan Georgescu: "A Standing Priority: Production for Exports"]

[Text] The Electronica enterprise is presently well known both at home and abroad for its audio and video electronic products. During its nearly 50 years of activity, the enterprise has covered the whole modern history of radiotechnology, from tube radio receivers to HiFi audio and video sets with integrated circuits.

Electronica became an exporter 20 years ago, first with radios, and since 1968, with black and white TV sets. During these two decades, products bearing the name Electronica have entered in tens of countries on five continents; today, the enterprise can be considered to specialize in exportation, with about 60 percent of its production being sent abroad.

The range of products and services currently offered for exportation includes: audio equipment such as console and portable radios, radio-tape players, music components, audio systems, as well as standard and high fidelity audio combinations; video products such as table or portable models of black and white television sets, color television sets, and monochrome TV monitors; subassemblies (SKD) and spare parts for its audio and video products; production lines for audio and video equipment, knowhow, as well as licensing and technical assistance for the fabrication of radio, audio, and video equipment; and services for products delivered abroad.

Among the factors which currently assure the competitiveness of the enterprise's products on foreign markets are: the development and modernization of production lines, the qualitative and quantitative development of departments for production planning, design, and preparation, and the increasingly stronger orientation of the enterprise's functions toward achieving the objectives of exportation programs. As a result of these factors, the research-planning-production cycle for new products in demand on foreign markets has been substantially reduced. The shorter time required to assimilate new products requested by our partners now makes it possible to produce radio-audio equipment with delays of one month for the simplest units, and up to three months

for sophisticated, high performance ones; in the case of video products this cycle is three months for conventional sets, and up to six months for products of unusual complexity and performance. The adoption of audio-video subassemblies and spare parts demanded by partners also requires 1-6 months depending on product complexity. Orders for audio and video manufacturing lines are honored within 6-12 months. In practical terms, the entire exportation inventory is renewed from one year to the next.

Along with the flexibility demonstrated toward the dynamics of foreign markets, another factor which contributes to exportation competitiveness is the concern to bring the enterprise's products up to international regulations and standards, and to meet the specifications and technical performances expected by the most stringent tests conducted in the United States, England, Ireland, FRG, Czechoslovakia, Poland, and so on, where for instance, TV sets have received UL, VDE, EZU, and FTZ certificates.

In listing competitiveness factors, we must not overlook the contribution of design activities. For instance, radios of high performance but presented in a "retro" style by the enterprise's specialists were met with good commercial success on representative markets for electronic consumer goods, such as Holland, Switzerland, France, and the United States, fitting into the "romantic" fashion trends for interior decoration. Similar success was obtained by digital clock radios on markets in the United States, France, Yugoslavia, Czechoslovakia, Chile, and FRG.

The foreign trade enterprise which exports Electronica's products is currently one of the largest electronics trade firm in Europe. The differential approach to foreign markets as a function of demand, has made it possible to diversify the line of products, particularly for miniature radios, so as to best match local consumption. These attractively designed radios, intended primarily for young people and introduced in 1985, have been well received by customers in Holland, the United States, Czechoslovakia, and Hungary.

Television sets have demonstrated the same concern for better technical performance, tuner selectivity, ease of handling, as well as diversified shapes and colors through greater use of plastic housings. Several demand segments can also be identified in this exportation sector: black and white television sets with 31 cm screens (diagonal dimension), in conventional or plastic housings, of various shapes and colors, and with good technical specifications, which have been exported for more than 10 years to such markets as the United States, FRG, Canada, England, PRC, Austria, Ireland, and Greece. West Germany has requested and received portable sets with a diagonal dimension of 41 cm, which have also been on the market for more than 10 years. And black and white table models with diagonal dimensions of 50-60 cm are exported on the basis of contracts with firms in PRC, Poland, Czechoslovakia, the Ivory Coast, and Jordan.

The large numbers of sets shipped to such countries as FRG and Czechoslovakia have required the creation of manufacturer service teams. At the present time, production renewal is aimed at introducing a diversified line of color

television sets: table models, portables, and various screen sizes. At the same time, the objective is to reduce power consumption from 75-90 W to 55-60 W and improve construction through industrial cooperation with European partners in addition to domestic efforts.

Some of the enterprise's recent products are the music center Stereoson; the Mini HiFi audio system composed of an integrated stereo amplifier, stereo tuner, and stereo cassette deck; the stereo radio-tape player with four wavelength ranges, two speakers, Fe, FeCr, Cr cassette selector, and LED indicator; the Ultrason radio with five wavelength ranges and very modern design, which has exceptional sound quality; and the Stereoson II music center with two 50 W amplifiers for discoteques, schools, and so on. In addition to compact radio and television sets, the enterprise is currently producing television component (or module) sets which are assembled by the partners; shipments of this sort have been made to Greece, England, while SDK sets have been sent to ROK. The Electronica enterprise has also participated in building a television plant at Phenian and a television assembly line in Burundi.

In recognition of the outstanding quality and performance of Electronica radios, the enterprise's specialists have been asked to equip interurban buses in Iraq with radios, amplifiers, and audio systems, which will operate under special environmental conditions (temperature, and so on).

Export products continue to be improved and expanded by providing radio receivers with multistandard circuits which will enable the concurrent reception of ultra-shortwave programs both in OIRT and CCIR modes; devices have been introduced to program audio reception; and color televisions are designed for the double system PAL-SECAM, and for a double standard.

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CSO: 2700/70

RESTRUCTURING OF LABOR FORCE DISCUSSED

Bucharest REVISTA ECONOMICA in Romanian No 39, 26 Sep 86 pp 7, 8, 20

[Article by Dr Ioan Bratu: "Professional Work Force Structure Consistent With Requirements of Modern Production"]

[Text] The extensive implementation of the advances made by today's scientific and technical revolution in all areas of activity, has created profound qualitative changes in the social production system, and requires that we raise the qualifications, and rapidly adapt the professional structure of the labor force to the demands of modern production. Nicolae Ceausescu, speaking to the Third Workers' Congress, emphasized in this respect that "decisive measures are needed in all sectors to improve personnel training, and constantly renew and raise the level of professional and technical knowledge. We must not forget, even for one minute, that intensive development, a new quality, a new efficiency, and high productivity can be achieved only with highly qualified and highly responsible workers."

Professional Qualification of Work Force at Technological Level of Production Capabilities

In order to emphasize the action of intensive factors in the development of our economy, we must assure a strong correlation between the level and structure of production capabilities on one hand, and the qualification level and professional structure of the work force on the other. At each moment and stage of development of production, material and human factors exist in a given quantitative and qualitative relationship: a given technological volume and level must be matched by a given number, qualification level, and professional structure in the work force. Consequently, the configuration of the work force structure in terms of qualification levels and professions, reflects the technical level and structure of production capabilities.

The technical level and structure of production capabilities are in turn influenced by the training level and professional structure of the work force. A high qualification level and a corresponding professional structure encourage the creation of modern economic structures and their constant improvement. Only by consistently assuring a dynamic structural balance among all

components in the production force, that can facilitate the most efficient utilization of resources, will it be possible to achieve a rapid rate of economic growth. The substance of professions, trades, and specialties--depending on the nature of the specific facilities and objectives of a given production process--are undergoing constant changes and transformations. In reflecting the comprehensive theoretical knowledge and practical skills necessary for one person to most efficiently perform a concrete task, professions reflect the qualitative values of the human factor. These values are directly fulfilled and perfected in the production process. They must constantly incorporate the newest advances of science and technology, and the entire production experience accumulated with time, thus being premises and consequences of the development of the national economy.

Table 1. Changes and personnel structure by forms of training

Dinamica si structura muncitorilor pe forme de pregătire

	Anul (A)	Total muncitori calificati (B)	din care: (C) Licee de specialitate	(D) Școală profesională	(E) Cursuri de calificare	(F) Practică la locul de muncă
Total muncitori calificați (G)	1978	100,0	5,0	28,4	40,3	25,0
	1983	100,0	10,3	31,6	38,0	20,1
(K)	Dinamică	112,3	229,0	124,8	104,6	87,8
din care :						
— Industrie (H)	1978	100,0	4,3	35,7	38,4	21,6
	1983	100,0	10,5	37,5	36,0	16,0
	Dinamică	116,9	290,0	122,6	109,6	86,4
— Construcții-montaj (I)	1978	100,0	2,9	24,5	50,4	22,2
	1983	100,0	4,7	24,8	46,3	24,2
	Dinamică	90,2	146,6	91,4	82,7	98,3
— Transporturi-telecomunicații (J)	1978	100,0	7,1	22,8	51,0	19,1
	1983	100,0	8,0	24,7	52,8	14,5
	Dinamică	122,6	137,6	132,8	127,2	93

Key: (A) Year
(B) All qualified workers, of which:
(C) Specialized high schools
(D) Professional schools
(E) Qualification courses
(F) Practical training on the job
(G) All qualified workers, of which:
(H) Industry
(I) Construction-installations
(J) Transportation-telecommunications
(K) Percent change

At the present time, rapid progress in facilities and manufacturing technologies determine two contradictory trends: profession diversification due to a larger number of products and services, and integration of elements that are common to various trades, in the form of professions that are more comprehensive and that can be exercised in various branches of the national economy. The introduction of electronics, automation, and computerization in social production intensify job integration and enrichment in many professions.

The rapid expansion of intensive production methods and the resulting rapid replacement of facilities, as well as shorter periods of operation for machines and tools, cause even more rapid changes in professions and trades. For instance, the modernization of the hot sectors at the 23 August enterprise in Bucharest brought about by a transition from manual to automated and mechanized casting, has not only increased production and improved product quality, but also changed the substance and nature of labor, working conditions, qualification levels, and the professional structure of workers. The expansion of technical systems which integrate electronics, automation, hydraulics, robots, and computers into these sectors, has broadened the workers' professional profiles (foundryman-automator, machinist-electronic specialist, and so on) and created new professions (operator, programmer, data analyst, electronic specialist). Conventional professions (foundryman-molder, cleaner-sander, and so on) have changed their substance and are disappearing, being replaced by new ones.

The growing complexity of production processes requires workers with sound training, broad technical and scientific knowledge, and exceptional practical skill. In this respect, the development of professional education in ever closer correlation with the demands of the socialist production system, has helped to steadily increase the proportion of qualified workers in the total work force. The available data shows that during the 1978-1983 period, the number of qualified workers in Romania increased by 12.3 percent, while their proportion was 83.7 percent in 1978 and 86.6 percent in 1983 (see table 1).

Notable against the background of more qualified workers in the national economy, are--first of all--a 129 percent growth in the number of workers trained in specialized high schools, intermediate foreman training schools, and post high-school specialization schools, and a 24.8 percent increase in the number of those trained in professional schools; secondly, the number of workers trained through qualification courses increased by only 4.6 percent, while the number of those qualified through practical production training decreased by 12.2 percent. Another result is a substantial change in the proportion of workers qualified through advanced forms of professional training. In 1983, about 42 percent of the workers had graduated from high schools and from technical and professional schools. School is now the principal method of professional training for workers.

The predominant trend in these changes, which will probably grow in the future, is the greater number and proportion of highly qualified workers, and the greater intellectual component in the substance of various professions.

Changes in Work Force Professional Structure

The extensive introduction of modern scientific, technical, and organizational progress in all areas of activity has made broad and profound changes in the professional structure of the work force. The major consequences of this progress on the professional structure of qualified workers in some branches of the economy can be summarized as follows:

a) Considerable reduction in the number of workers in trades involving manual labor, or even disappearance of some trades. Various trades such as charcoal maker, raftsman, and so on, disappeared during the 1956-1983 period. The number of workers in other trades, such as locomotive fireman, bootblack, mine-car hauler, manual forger, manual sander, manual shoemaker, manual printing composer, conductor (bus, trolley), baker, miller, chimney sweep, and so on, was reduced considerably. Between 1978 and 1983, the number of coopers was reduced by 22.9 percent, of car drivers by 17.6 percent, of mine supervisors by 15.3 percent, of joiners by 8.8 percent, and so on;

b) Nearly constant number of workers in some trades. During the 1978-1983 period for instance, the number of workers increased by only 2.9 percent for signalmen-couplers, 0.9 percent for forgers, 1.4 percent for upholsterers, 3.1 percent for concrete iron-workers, 0.7 percent for locomotive mechanics, and 0.3 percent for masons;

c) Increased number of workers in some trades. During the 1978-1983 period large increases were recorded for the following trades: metrologist, verifier, repairman, 193.8 percent; mine electrician, 82.9 percent; forester, 66.2 percent; wire drawer, 53.8 percent; operations electrician at power plants and electric stations, 51.5 percent; grape grower, 47.7 percent; oil-well driller, 43.5 percent; mechanic machinist in the machine construction industry, 39.6 percent; nonferrous metals metallurgist, 355.1 percent;

d) Creation of new trades. Among the new trades that have appeared in the past decade are: control panel operator, electronics specialist, optical specialist, automator, hydraulics specialist, data processing operator, programmer, analyst, and so on. During the 1978-1983 period, the number of electronics specialists has grown to more than 24,000 and that of optical specialists to more than 2800.

The creation of a modern economy based on the implementation of the newest advances of science and technology requires the presence of qualified workers able to efficiently use and develop the country's technical and material potential. It is significant in this respect that on 30 September 1984, advanced training was required for 0.5 percent of all labor jobs, high school and foreman training for 10.2 percent, and professional, general, and other schooling for 89.3 percent, as compared to only 0.2 percent, 5.4 percent, and 94.4 percent respectively on 30 September 1978. The fact that in 1984 more than 27,000 labor jobs required intermediate training reflects the gradual increase in the intellectual component of work activities and the growth of the workers' professional competence.

The personnel with higher and intermediate specialized training has grown together with economic development, the mechanization and automation of production processes, and the improvement of the economic mechanism. The increased number and ratio of specialists in the ranks of workers is one of the characteristics of the modern economy. In Romania, the number of workers with advanced training was about eight times greater in 1984 than in 1950, and nearly three times greater than in 1965.

The data in table 2 shows that the number of specialists has increased in all areas, with the most substantial growth being found in the technical and economic, university teaching, and medical-pharmaceutical areas. At the same time, broad structural changes have been caused by differentiated growth rates. The largest ones consist in a larger proportion of technical and economic personnel, both with advanced and intermediate training; a greater ratio of personnel with advanced training in university teaching, and a decrease in those with intermediate teaching education; and a reduction in the number of medical-pharmaceutical personnel with advanced training with an increase in the proportion of intermediate health specialists.

Table 2. Average annual growth rate for personnel with advanced and intermediate specialized training, by major professional groups, and their proportion among all workers

Ritmul mediu anual de creştere a cadrelor cu pregătire superioară şi medie de specialitate pe principalele grupe de profesii şi ponderea acestora în ansamblul personalului muncitor

(A) Grupa profesională	(B) Ritmul mediu anual de creştere în perioada 1960—1984	(C) Ponderea diferitelor grupe în totalul personalului muncitor		
		2 sept. 1960	30 sept. 1978	30 sept 1984
Cu studii superioare				
— tehnice	7,1	2,2	2,8	3,9
— economice	7,0	0,6	0,9	1,1
— universitar-pedagogice (D)	3,9	1,8	2,0	2,0
— medico-farmaceutic	2,8	0,7	0,6	0,6
Cu studii medii de specialitate				
— tehnice	7,2	3,3	4,3	6,0
— economice	6,6	1,4	1,9	2,3
— pedagogice (E)	1,7	1,6	1,5	1,3
— sanitare	4,5	1,4	1,6	1,6

Key: (A) Professional group
(B) Average annual growth rate, 1968-1984
(C) Proportion of various groups among all workers
(D) With higher education
Technical
Economic
University teaching
Medical-pharmaceutical
(E) With intermediate specialized education
Technical
Economic
Teaching
Health

This picture of the growth of specialized personnel in different areas must be complemented with an analysis of the major professions based on the censuses of 1966 and 1977. The data has shown that a number of professions that are very important for the economy's modernization--engineers, subengineers, scientific researchers, physicists, biologists, chemists, biochemists, mathematicians, analysts, programmers, and so on--have also changed very rapidly. These specialists play a very large role in scientific research and technical development, in production organization and management, in personnel training, and in health protection.

Together with the emphasis on specialization, natural and social science specialists are being integrated into professions with broader areas of activity.

The differences between them are thus attenuated due to the need to master general, scientific, and technical knowledge in any profession; the proportion of some professions, such as specialists in planning, organization, marketing, computers, automation, biochemistry, and so on, which require knowledge about several fields, is consequently increasing.

Both technical innovation associated with the introduction of new products or manufacturing processes, and organizational innovation, which has created new systems of management and organization, have increased the number and proportion of professions, with dynamic effects on the economy's development. Several trends can be found for specialized personnel among these various processes, whose effects have been unquestionably wide-reaching for their relatively short duration. Some professions are changing rapidly (analysts, programmers, data operators and controllers, mathematicians, physicists, scientific researchers, biologists, botanists, geologists, chemists, biochemists, foremen, engineers and subengineers, economists, and so on), other more slowly (doctors, teaching personnel, technicians, commodity specialists), and some are waning (pharmacists, jurists, statisticians, accountants).

More Efficient Use of All Specialists

Because the decisive factor for developing and modernizing production in our country is our effort to innovate, assimilate, and perfect production facilities, as well as to increase and improve the number and professional structure of specialized personnel, particular attention is being devoted to the complete and efficient utilization of the work force. Higher economic efficiency implies an exploitation of the total available intellectual potential in order to develop and modernize economic structures, encourage novelty, and increase efficiency in all sectors of activity.

A substantial improvement in the use of specialists in production essentially requires that we:

a) Create conditions to increase the proportion of conceptual work on the part of specialists at each organizational link and area of activity, by formulating programs which will demand the utilization of acquired knowledge,

and the accumulation of new knowledge. Many production sectors feel the need for a larger number of technicians who will take over a large portion of the current, ongoing functions that are currently being performed by engineers at the expense of conceptual work;

b) Assign--with priority--specialists with advanced training, and especially engineers and economists, to in-plant scientific research, technical engineering, and redesign sectors. Today, economic efficiency depends primarily on the quality of production design, and in the assignment of specialists, increasing priority must therefore be given to product design compared to production itself. Construction and technical improvements must lead to a substantial improvement in the utilization index of raw and other materials, to energy and fuel savings, to greater labor productivity, and to higher competitiveness for Romanian products;

c) Improve the information system so that each specialist with advanced training will be supplied with high quality and timely information so as to facilitate awareness and the improvement of all economic and social aspects and phenomena. Unavailable or poor quality information affects the quality of technical, technological, economic, and organizational concepts, as well as the quality of decisions taken at all organizational levels. The renewal that has occurred in production throughout the world at ever shorter intervals, the changes that must not only be known, but also instituted in order to impart a modern character to the economy, imply the existence and dissemination of a large amount of good quality information;

d) In each economic unit, establish interdisciplinary creative collectives constantly oriented toward the introduction of novelty in all sectors of activity. We believe it necessary that these collectives be assured with optimum documentation conditions, and with the facilities for studies and experiments to perfect production.

Only by constantly studying production process, technologies, tooling, and production installations, will it be possible to achieve a substantial change, a true qualitative transformation in the role of specialists in production. As a result, they must not be loaded with operational, daily, organizational, and administrative tasks. Our economy now needs specialists with sound professional training, who can think in economical terms, and who in the production process will create not only material goods, but also new ideas, solutions, and principles, which implemented in social production will lead to greater economic efficiency.

These measures should be complemented with the application of a system of specific indicators, which will allow constant control of activities, correct evaluation of results, as well as become the foundation for work assessment. Only by constantly developing their professional and political competence, and by participating directly in the improvement of production technique, technology, organization, and management, will specialists be able to increase their contribution to production development and modernization, and to raise to higher levels the efficiency of our national economy.

Constant adaptation of the professional structure of the work force to the needs and demands of each stage, as well as competent and responsible fulfillment of each person's tasks in social production, represent fundamental conditions for the economy's progress and for raising the material and cultural standard of living of all our people.

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MICROHYDROELECTRIC PLANTS NEEDED FOR AGRICULTURE

Bucharest REVISTA ECONOMICA in Romanian No 39, 26 Sep 86 pp 10-11

[Article by Oprea Parpala: "Hydraulic Power, One Component of the Agricultural Power System"]

[Text] The exploitation of the energy of small streams illustrates the importance of these resources for hastening technological and economic progress in the socialist agriculture. This action assumes the utilization--in equal measure and independently of economic domain--of advantages both in large scale production and small scale production, since the latter--based exclusively on domestic efforts--requires lower investments and a minimum of outside intervention, but at the same time needs more manpower. In this context, the nature of hydraulic power in small waterways has a totally exceptional significance.

Characteristics and Resources of Small Rivers

In the agricultural power system, the hydraulic power supplied by small streams is complementary in nature, but unlike wind power for instance, is more constant, since even at times of reduced flow, reservoirs allow microhydroelectric plants to operate at design values. As a result, they do not need special installations to store electricity, since the latter is produced at a know rate. At the same time, small or large hydroelectric systems are reliable and flexible, while equipment maintenance is relatively simple and inexpensive.

The most important economic advantage in the exploitation of hydraulic resources through microhydroelectric plants is in the fact that they are operated by manpower available in villages. The state provides technical studies and instructors for construction, but does not need to grant subsidies or construction materials from the central fund. The rural population can build dams, plants, and canals during the agricultural "dead" season, using its own digging tools and means of transportation, which do not require an additional consumption of fossil energy. The dams can be built of earth or stone, with a minimum consumption of cement, steel, and wood.

The installation of each microhydroelectric plant must be adapted to the terrain, and take into consideration the stream's specific flow variations and other hydraulic conditions. The theoretical power generated by a stream can be calculated from the formula (Footnote 1) (B. A. Stout, C. A. Myers, A. Hurand, and L. W. Faidley: . "Energy for World Agriculture," FAO, Rome, 1979):

$P\ (kW) = 9.8 \times Q\ (m^3/s) \times H\ (m)$

where Q represents water flow in m^3/s, determined by multiplying the transversal cross section of the waterway by its speed, and H is the height of the water head (in m).

The average annual volume of water flowing through Romania's domestic rivers is estimated at 34 billion m^3 (which means a flow of 1085 m^3/second), with nonuniform distribution not only as a function of geographical level (mountains, subcarpathian hills and foothills, plateaus, and plains), but especially as a function of time, from one year to another as well as during a given year (maximum flow of 30-50 percent occurring in the spring, except for the western rivers, where this phenomenon occurs in the winter).

The principal factor that determines these variations is the environment of the water basin: 10-20 l/sec.km^2 for rivers whose basins are mostly in the mountains and are exposed to western air flow (Viseul, 18.7 l/sec.km^2; Cerna at Orsova, 17.2 l/sec.km^2); 5-10 l/sec.km^2 for rivers with large hydrographic basins and with a flow balanced over all altitudes (Jiul, 8.7 l/sec.km^2; Crisul, 5.7 l/sec.km^2); 3-5 l/sec.km^2 for rivers whose basins lie mostly in plateau and plain regions (Arges, 4.9 l/sec.km^2; Ialomita, 4.0 l/sec.km^2); 1-3 l/sec.km^2 for rivers whose basins are located entirely on plateaus and plains (Bega, 2.8 l/sec.km^2; Vedea, 2.1 l/sec.km^2; Calmatuiul at Braila, 1.0 l/sec.km^2); and less than 1 l/sec.km^2 for rivers in the Dobrogea network, most of which have an intermittent flow.

Water resources can be balanced in time and space by forming reservoir lakes, interconnecting hydrographic basins (through canals and diversion channels), correcting beds, and damming rivers (Footnote 2) (Petre Gisteanu et al: "Evaluation of River Water Resources and Improvement of Hydrographic Basins in Romania," TERRA, No 2/1980).

Exploitation Techniques and Practices

The oldest technique for exploiting the hydraulic power of small streams--at which our ancestors proved to be exceptionally inventive--is the water wheel. The name Roata (Wheel) which some villages still carry today, testifies to the importance of this installation (rudimentary by the standards of other achievements), not only to the specific rural community, but to surrounding ones as well. The water wheel proves to be particularly efficient when it is used to satisfy lower power requirements (1-10 kW), especially where there are no power production installations and where the water flow is very variable. Water wheels with undershaft or overshaft feeds convert hydraulic energy into mechanical energy, and are generally used for operations that do not require high speeds.

A specifically Romanian technique for using hydraulic power is the floating mill (created centuries ago, at Munteni-Vilcea and Lucacesti in Maramures, for instance). It was built on two floats of different sizes (one for the mill itself and the other to support the shaft of the water wheel, which was large and had long paddles to capture the largest possible amount of water power).

But in order to obtain higher installed power and a broader range (from 20 kW to 1 MW or even more), it became necessary to use hydraulic turbines which can be connected into the general electricity distribution network, or can directly supply the electric power needed in an isolated area or small town. The type of hydraulic turbine to be used depends on the water head. Pelton wheels for instance, are used for large heads (above 150 m); Francis and Mitchell wheels for intermediate heads (15-150 m): and Kaplan wheels are recommended for low heads (2-15 m). Actually, the Pelton wheel is no more than an improved version (by doubling the buckets and making them out of metal) of the old bucket mill, which for centuries (maybe even as far back as the Dacians) could be found by the hundreds along streams in the Romanian Carpathian arc (12 examples can be found in the Peoples' Technology Museum at Dumbrava-Sibiu, and one--dating to the 17th-18th centuries--can be found at the Munich Museum, labeled "Lofferald einer Muhle aus Rumanien." The best of its kind is the six-bucket mill at Calesoaia in the county of Gorj, which is a veritable plant for transforming hydraulic power into mechanical power.)

Hydraulic rams are used for low water heads; they operate at 75-90 strokes per minute with an efficiency of about 60 percent, such that a water flow of 10 l/sec and a head of 5 m can raise 0.5 l of water at a height of 55 m. Hydraulic rams are practical water pumping systems when water flow and head are sufficiently large.

The major characteristics of the most widespread technologies used throughout the world to exploit hydraulic energy are shown in the table.

Internationally, extensive experience in exploiting the energy of small rivers by means of microhydroelectric plants has been accumulated in PRC, a country which probably has the greatest wealth of hydraulic resources (assessed at 680 million kilowatts, more than one-half of which are usable). China's experience in building such plants has elicited lively interest not only in developing nations, but also in such countries as France, Sweden, and the United States as a result of problems raised by oil and coal supplies, as well as by the environmental damage associated with large dams (a California company, for instance, has bought from China components for 5-200 kw hydroelectric generators). In 1980, the number of microhydroelectric plants built with the efforts of teams, brigades, and communes, had reached the significant figure of 90,000; it represented a total installed capacity of 7.1 million kW (11 percent of the country's power capacity). Three-fourths of China's 2100 districts (especially those in the country's south and southwest, which are rich in water) have microhydroelectric plants, which in 730 districts are the

principal source of electricity. The average power of a Chinese microhydroelectric plant is 78 kW, but some produce less than 25 kW. In the Chinese concept, the efficiency of such plants is measured not only by power production and its cost, but especially in terms of the profound social changes they bring to village life.

Characteristics of various technologies for exploiting hydraulic power

Caracteristicile diferitelor tehnici de valorificare a energiei hidraulice

Tipul (A)	(B) litri/sec.	Înălțime de refulare (m) (C)	Viteză (ture/minut) (D)	Randament (%) (E)	Putere furnizată (kW) (F)	Adaptabilitatea la o schimbare de (G)		Gradul de tehnicitate a construcției (H)
						debit	presiune	
Roți hidraulice :								
— cu admisie inferioară (I)	300—3 000	0,5—3	2—12	40—75	1—10	bună	satisfăcătoare	modest/ medie
— cu admisie superioară (I)	30—1 000	3—10	2—12	50—80	1—10	bună	deloc	modest
Turbine hidraulice (numai pentru microhidrocentrale)								
— Pelton (J)	30—500	50—1 000	500—1 000	82—85	40—400	bună	deloc	mediu
— Mitchell (Banhi) (J)	100—3 000	3—50	100—400	80—84	30—700	bună	bună	mediu
— Francis (J)	50—5 000	10—200	250—1 000	82—90	100—1 000	medie		inalt
— Kaplan sau în elice (J)	1 000—1 500	2—20	200—500	80—90	20—1 000	medie	medie	inalt

Key: (A) Type
(B) Liters/sec
(C) Pumping head (m)
(D) Speed (revolutions/minute)
(E) Efficiency (percent)
(F) Supplied power (kW)
(G) Adaptability to a change in
Flow
Pressure
(H) Level of construction technology
(I) Water wheels
Undershaft
Overshaft
(J) Hydraulic turbines (only for microhydroelectric plants)
Pelton
Mitchell (Banhi)
Francis
Kaplan or propellers
(K) buna = good
medie = average
satisfacatoare = satisfactory
deloc = none
modest = modest
mediu = average
inalt = high

In addition to lighting and food preparation, and as motive power for threshers, mills, oil plants, fodder preparation installations, rice hulling machines, and so on, the electricity produced by these plants is used to

develop small industries in villages, thus stemming the exodus of the rural population toward cities. More than 1.4 million enterprises (supplied with electricity) presently operate in communes and brigades, fabricating agricultural tools, rice paper, or even cement.

After 1980, the growing demand for electricity has led to the construction of new hydroelectric plants, larger than the earlier ones. Since electricity production by small installations varies as a function of water supply, the trend has been to connect several of them into a single network. Experience has shown that in order to assure a constant supply of electricity and increase village industrialization, it is necessary to organize a network of at least 10,000 kW (Footnote 3) (Margarita Robert, "Electricite, Une Reponse Chinoise," FORUM DU DEVELOPPEMENT No 83/1982).

In our country, as early as 1980, the Electromotor enterprise of Timisoara started to design and produce generators and their respective turbines in order to fulfill the program for exploiting the energy potential of small mountain, and even flatland streams; these products were based on domestic designs and intended for low power hydroelectric plants. The first microhydroelectric generator prototypes created in Timisoara consisted of four synchronous generators that produced 7-12 kVA at 750 rpm, equipped with control and measurement devices. In addition to the microhydroelectric generators, the construction of the first hydroelectric plants also required the fabrication of the respective turbines. It should be pointed out that the turbine produced by Electromotor covers a water flow range of 0.35-0.55 m^3/s and heads of 2.2-5.5 m, which corresponds to powers of 5-20 kVA. While in 1980 the enterprise produced 50 microgenerators with powers of 5-50 kVA, in 1981, the organization of a special department for microhydroelectric generators raised the power range to 100 kVA, thus meeting more needs depending on the variable energy potentials of various small streams throughout the country (Footnote 4) (Ioana Cezar, "Microhydroelectric Generators and Utilization of the Energy Potential of Small Rivers," SCINTEIA, 25 March 1981).

Conclusive in this respect is the experience of Bacau County in using small streams (especially those in the mountains) to produce electric power, by formulating a program which provides for the construction over the next 10 years, of nearly 100 minihydroelectric plants with a total installed power of 86,675 kW along the valleys of the Trotus, Tazlau, Casin, Oituz, and other mountain rivers. More than 50 such plants with a total annual power production of 108,130 MWh were planned by 1985, to be built from local materials (as was done at the plants in Manastirea Casin, Faget, Agas, Asau, and Comanesti, as well as at the ones under construction at Doftana, Bogdanesti, Orasia, Andriesti, and so on. Expected to be placed in operation soon are the microhydroelectric plants at Belci, Doftana, and Borzesti, which together with other small plants have an installed power of 2200 kW. In addition to the savings of liquid fuel (the Scutaru microhydroelectric plant creates annual savings of 60 tons), electricity production in microhydroelectric plants is much more profitable than with other generators (the cost per kilowatt is only 6 bani at Scutaru, compared to the 30 bani it cost when it was produced by another generator, thus leading to average annual savings of at least 100,000 lei) (Footnote 5) (Gheorghe Balta, "Development of the Energy Basis. String

of Microhydroelectric Plants on Mountain Streams," SCINTEIA, 7 May 1983).

Areas of Utilization and Economic Efficiency

As for other forms of renewable energy, the hydraulic energy of small rivers can be used in rural environments, including for agricultural production, both directly (in its natural form) and indirectly (by transforming it into electricity).

The agricultural utilization of the energy in small streams has been practiced since the oldest times, through the technical means of the well known wheel, which today remains just as current. Installed on fast mountain rivers, the wheel--moved by the energy of the streams--converts hydraulic energy into mechanical energy to drive various installations for processing agricultural products (grain mills, oil presses, pounding mills for abala [as published], paper mills, and so on). Mechanical power derived from hydraulic energy by the wheel, has been used to industrially process agricultural products even before steam power, which gradually replaced it. In hills and mountain regions, where individual households which produce part of their own needs predominate, a reconsideration of the water wheel with its many applications represents an important source of renewable energy.

Reconsideration of the water wheel is also necessary in the plains, whose rivers are less powerful but useful for irrigating vegetable crops. Fulfillment of the program for self-supplying vegetables--products that are difficult to transport and are highly perishable--requires a revision of the concept of optimum concentration of vegetable crops in socialist agricultural units which do not specialize in those crops. Under these conditions, use of the wheel (animal-driven) can contribute decisively to higher yields per hectare and economic efficiency in vegetable production. The elimination of small vegetable gardens, which at one time reflected the hard work of even the smallest rural collectivity, must be reexamined in the light of the new requirements of the program for rational food supply for the population, which increases the importance of the wheel for pumping irrigation water.

Electricity production from the hydraulic energy in small rivers not only can help the country's electric power balance by smoothing production as a function of consumption, but also becomes an important factor in the program to develop the most diverse forms of small industries in villages. In addition, the electric power produced by microhydroelectric plants can supply isolated consumers in locations where the installation of electric power networks is very expensive and difficult, such as forest and tourist cabins, sawmills, or agricultural units (as at Tomesti in Timis County, at the Reghin IFET, or Sibiu).

The economic efficiency of producing electric power in microhydroelectric plants is determined primarily by investment costs.

The microhydroelectric generators manufactured by Electromotor Timisoara, and installed at the Reghin IFET and the Alba Forestry Inspectorate, have worked extremely well during more than 2000 hours of operation, producing electricity at a cost of only 0.07 lei kWh (Footnote 4) (Ioana Cezar, "Microhydroelectric Generators and Utilization of the Energy Potential of Small Rivers," SCINTEIA, 25 March 1981).

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ECONOMISTS DISCUSS LCY RESPONSIBILITY FOR ECONOMIC CRISIS

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 24 Nov 86 pp 12-13

[Article by M. Lakicevic: "The Economy and the Party"]

[Text] Is a change in the League of Communists of Yugoslavia (in its position) possible, and if so, under what conditions and how? Actually, that question was not the principal topic of the meeting of scientists organized by the "Boris Kidric" School of Economics and held in the middle of this month in Ljubljana, but it did precipitate out of the more general title "Relation Between the Economy and Politics in Yugoslav Society" during the discussion itself and imposed itself as the key issue. After all, Dragan Veselinov said, the crisis has brought even the party to a crossroads.

It should not sound disappointing if we state at once that this meeting did not send any sort of unanimous and complete answer or solution to the question that was posed. Not because the question was not taken up. On the contrary, the economists did concern themselves with politics and the party, there were sparks flying and polemics, and by virtue of that fact there were also quite a few proposals.

This was most visible through the positions taken concerning the Stabilization Program and the Critical Analysis. For example, Zdravko Tomac said in the written paper presented to this meeting: "...it is not difficult to prove that though there are certain differences, the Long-Range Economic Stabilization Program and the Critical Analysis of the Political System still do as a whole propose a single strategy for overcoming the economic crisis, and that is by preventing the reproduction of the old system (the statist system)." And he goes on: "I therefore feel that the general orientation of the Critical Analysis...is correct, that it points up the main problems, and that it is open to all the changes which are in keeping with that strategy."

Quite the opposite opinion was expressed by Bogomir Kovac: "The Economic Stabilization Program and the Critical Analysis...are mutually exclusive precisely in the fundamental error of the dualistic intertwining of the economic and political systems in the seventies and eighties. The Economic Stabilization Program set up the economic reform correctly, affirming the market mechanism and economic laws, but it takes for granted that the political system of the seventies remains in place. The Critical Analysis of the Political System,

on the other hand, demands changes in political institutions within the framework of the unchangeability of the normative economic system of the seventies, so that these two approaches are mutually exclusive...." Vladimir Gligorov, however, says that in spite of the self-management phraseology in the Critical Analysis..., it actually offers a further expansion of administrative intervention and political voluntarism.

The difference in conceptual viewpoints was especially evident in attitudes toward the Law on Associated Labor. Whereas Tomac feels that the Law on Associated Labor needs only to be refined, though he acknowledges that "significant changes" are required, others take the view that it should simply be repealed and this area turned over to work organizations to regulate as they see fit (Gligorov, Korosic).

Does the Party Hold the Key

The blockage of reformist programs has already become the rule in socialist systems (B. Kovac). In the opinion of many, the cause of this blockage lies in the fact that economic democracy demands political democracy. As Branko Horvat put it, what has occurred in Yugoslavia is "a conflict between the authoritarian political superstructure and the self-managing economic base." The way out of that situation lies in democratization of the political system, and that cannot happen without democratization of the League of Communists. Over the last 14 years, Horvat says, a revision has taken place in the basic ideas of the revolution: instead of the AVNOJ Federation, we have a confederation; the 6th LCY Congress abandoned the idea of the one-party state and launched the thesis of a state without a party, while since 1972 we have had a revival of the one-party system, and the party has even been incorporated in the constitution; the 1958 LCY Program represents the supreme act of collective reason in this country; now it has been replaced by feudal statism--enterprises have been disintegrated by force, the working class has been deliberately broken up into pieces; under those conditions the LCY is no longer the vanguard, but a reflection of all the separations in this country, and so on. Is it not an illusion, Horvat asks, to expect that the party which allowed all this will pull us out of the crisis? At this point the possibility of whether reform of the League of Communists is possible is inevitably posed. But how, Horvat goes on to ask, when even such a harmless move as the open slates of candidates cannot get through? Horvat feels that the solution does not lie in the multiparty system, since, he says, we already have eight parties, each with a monopoly on its own turf, and they are in a permanent coalition. In the opinion of Vojmir Franicevic, "not only is the LCY in crisis, but it cannot even offer a way out of it unless it authentically resolves the contradiction between its own one-party rule and the self-management which gives it political and ideological legitimacy. Either the LCY should abandon the project of socialist self-management or finally make the move to that position in society which it is entitled to in the program." Having stated that it is not a question of eight parties but of eight factions in a single party, Dragan Veselinov essentially agreed with Horvat that the heart of the resistance to changes in the political system lies in the party. A change in the position of the party is a precondition for change, but at present the party figures as the arbiter everywhere: in the domains of ethics, the nationalities, economics, and art. But it is not possible to foresee that the present position of

the party can change: "I do not see," Veselinov said, "what socialist force outside or within the party can bring about or demand a change in it." Agreeing with Veselinov on the question of the one-party nature of our political system, Vladimir Gligorov took a somewhat different view with respect to the initiators and protagonists of the process of democratization. The problem of democratization of socialist society has had two phases, Gligorov says. The first, up until 1968 and the events in Czechoslovakia, when "there was hope" that democratization of society could come about through democratization of the party, and the second, after those events, when an attempt has been made through autonomous politics, through the mixed economy and pluralism of interests to exert pressure on the political monopoly.

Stefan Korosec, member of the Presidium of the LCY Central Committee, agreed to the need for profound reforms of the political system and democratization of the party, but he posed the question of how and on what basis those changes are to be carried out. Korosec especially emphasized the problem that science is often offering different alternatives, remarking that there were two different theories even concerning the foreign debt, which Horvat had previously spoken about in critical terms. Vlado Klemencic mentioned that in spite of the great dissatisfaction there is in the public, there is not much willingness to carry out changes, as can be seen from the fact that business executives themselves often go to committees to seek help, which is just one example. Fuad Muhic (who otherwise had taken the position in this meeting that politics has been dominant over the economy and that there is a need to reaffirm economic laws) reacted to this, saying that through its excessive interventionism politics has created unprofitable enterprises and appointed inept enterprise managers who, being what they are, actually have no other choice. Indeed, Muhic emphasized, that is how the political bureaucracy on the one hand gives the impression of its own usefulness, while on the other it is reproducing its real power.

In essence, however, all of this is the consequence of the conception that the economy is supposed to serve the goals of the revolution, that is, the building of new social relations, while as a practical matter it is serving the political aims of the moment, Vladimir Gligorov says. That is why the socialist economy is in effect a political economy. The basic characteristics of the socialist economies, which, according to Gligorov, date from the Stalinistic period, are these: an economy that is pure from the standpoint of ownership; the market is an instrument of politics, and third, it is an economy based on credit. Gligorov accordingly proposed "three areas" in which the political economy would be abandoned as a precondition for conducting a sound economic policy. First, changing the ownership structure in the direction of a mixed economy; second, liberalization of the market; and third, opening up the financial market. These are broad demands for changes, Gligorov said, but they are not even the most general ones. This would guarantee liberalization (of the economy), but it would not yet guarantee democratization. That is because democratization is a political process.

[Box, p 12, left]

Ljubomir Madzar:

Thirty-six years after the inauguration of self-management the spread of other organizational forms, above all those in the private sector, but also those in the public sector, is being restricted by political and administrative means, that is, by forceful means. If our economic policymakers, especially the institutionalized entities which shape social consciousness, believed in the strength of an economy organized on the basis of self-management and especially in its ability to hold its own in an equal struggle with other organizational forms, the numerous artificial constraints and prohibitions would long ago have been removed and we would have free competition on a large scale among the self-managed, private, and public sectors in our economy. In this case there would be government railroads (and perhaps steel mills) operating at full tilt, and private factories making cookies and shoes would spring up.... The maximum landholding would be a curious antique from a remote and largely forgotten past. However, the administrative prohibition on other forms of ownership and other organizational forms and the forcible maintenance of monopoly for the officially inaugurated self-management form is living proof that official politics does not believe in the ability of self-management to reproduce itself and survive in the competition with other forms.

[Box, p 12, right]

Marijan Korosic:

The problem of coercion in Yugoslav society has been raised quite seriously in the recent past. There must be law and order. We have discussed here whether we have one or eight parties, but more important is that we must have three independent aspects of government: legislative, administrative, and judicial. Otherwise there is neither economics nor politics. Politics comes about when coercion ceases and when the dialogue begins.

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AMENDED CONSTITUTION PUBLISHED

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[The Constitution of the Socialist Republic of Romania*]

[Text] Title I--The Socialist Republic of Romania

Article 1. Romania is a socialist republic. The Socialist Republic of Romania is a sovereign, independent, and unitary state of the working people in towns and villages. Its territory is inalienable and indivisible.

Article 2. All power in the Socialist Republic of Romania belongs to the people, free and masters of their fate.

The people's power is based on the worker-peasant alliance. In close union, the working class--the ruling class in society--the peasantry, the intelligentsia, and the other categories of working people, regardless of nationality, are building the socialist order, creating the conditions for the transition to communism.

Article 3. In the Socialist Republic of Romania, the guiding political force of the whole society is the Romanian Communist Party.

Article 4. Sovereign holders of power, the people exercise it through the Grand National Assembly and through the people's councils, bodies elected through a universal, equal, direct, and secret vote.

The Grand National Assembly and the people's councils constitute the basis of the entire system of bodies of the state.

The Grand National Assembly is the supreme body of state power, under whose guidance and control all other bodies of the state perform their activity.

* Republished on the basis of Article II of Law No 19 of 23 October 1986, published in BULETINUL OFICIAL AL REPUBLICII SOCIALISTE ROMANIA, Part I, No 64, 27 October 1986.

Article 5. Romania's national economy is a socialist economy, based on socialist ownership of the means of production.

In the Socialist Republic of Romania, the exploitation of man by man is abolished forever, and the socialist principle of distribution according to the quantity and quality of work is followed.

Work is a duty of honor for each citizen of the country.

Article 6. Socialist ownership of the means of production is either state ownership--of the property belonging to all the people--or cooperative ownership--of the property belonging to each cooperative organization.

Article 7. The subsoil's riches of any kind, the mines, the land in the state reserves, the forests, the waters, the sources of natural energy, the factories and plants, the banks, the state agricultural enterprises, the agricultural mechanization stations, the lines of communication, the state means of transportation and telecommunication, the state supply of buildings and dwellings, and the material base of the state social and cultural institutions belong to all the people and are state property.

Article 8. Foreign trade is a state monopoly.

Article 9. The land of the agricultural production cooperatives and the animals, implements, installations, and structures that belong to them are cooperative property.

The plot of land found, in accordance with the statute of the agricultural production cooperatives, in the use of the family farms of the cooperative peasants constitutes cooperative property.

The house and farm outbuildings, the land on which they stand, and, in accordance with the statute of the agricultural production cooperatives, the production animals and small agricultural implements constitute personal property of the cooperative peasants.

The implements, machines, installations, and structures of the artisan cooperatives and of the cooperatives for production, purchases, and sale of goods are cooperative property.

Article 10. The agricultural productive cooperatives, a socialist form of organization of agriculture, provide conditions for the intensive cultivation of land and the application of advanced science and contribute, by raising the output, to the development of the national economy and to the continual growth of the standard of living of the peasantry and of all the people.

The state supports the agricultural production cooperatives and protects their property. In addition, the state supports the other cooperative organizations and protects their property.

Article 11. Under the conditions of cooperativized agriculture, the state guarantees to the peasants who cannot associate in agricultural production cooperatives ownership of the land that they themselves and their families work and of the implements used for this purpose and ownership of the work and production animals.

Ownership of their own shops is also guaranteed to the artisans.

Article 12. Land and structures can be expropriated only for work of public interest and on payment of fair compensation.

Article 13. In the Socialist Republic of Romania, all state activity has as a purpose the development of the socialist order and the flourishing of the socialist nation, the continual growth of the people's material and spiritual well-being, the securing of man's freedom and dignity, and the multilateral affirmation of the human personality.

For this purpose, the Romanian socialist state:

Organizes, plans, and manages the national economy;

Protects socialist property;

Guarantees the full exercise of the rights of the citizens, ensures socialist legality, and defends the rule of law;

Develops education of all grades, provides the conditions for the development of science, art, and culture, and provides health care;

Secures the defense of the country and organizes its Armed Forces.

Organizes relations with other states.

Article 14. The Socialist Republic of Romania maintains and develops relations of friendship and fraternal collaboration with the socialist countries in the spirit of socialist internationalism, promotes relations of collaboration with countries having other social and political orders, and works in international organizations to secure peace and understanding among peoples.

The foreign relations of the Socialist Republic of Romania are based on the principles of respect for national independence and sovereignty, equal rights and mutual advantage, and noninterference in internal affairs.

Article 15. The territory of the Socialist Republic of Romania is organized into territorial-administrative units: the county, the city, and the commune.

The capital of the Socialist Republic of Romania is the municipality of Bucharest, which is organized according to sectors.

The bigger cities can be organized as municipalities.

Article 16. Romanian citizenship is gained and lost in accordance with the law.

Title II
The Basic Rights and Duties of the Citizens

Article 17. The citizens of the Socialist Republic of Romania, regardless of nationality, race, sex, or religion, have equal rights in all fields of economic, political, legal, social, and cultural life.

The state guarantees the equal rights of the citizens. No restriction of these rights and no difference in exercising them on the basis of nationality, race, sex, or religion are permitted.

Any expression having as a purpose the establishment of such restrictions, nationalistic and chauvinistic propaganda, and the incitement of racial or national hatred are punished by law.

Article 18. In the Socialist Republic of Romania, the citizens have the right to work. The opportunity to perform, in accordance with his training, an activity in the economic, administrative, social, or cultural field, remunerated according to its quantity and quality, is given to each citizen. For equal work the pay is equal.

Measures for labor protection and safety and special measures for protecting the labor of women and young people are established by law.

Article 19. The citizens of the Socialist Republic of Romania have the right to leisure.

The right to leisure is guaranteed to those who work through the establishment of the maximum duration of the workday at 8 hours and of weekly rest and through annual paid vacations.

In the sectors with hard and very hard work, the workday is reduced below 8 hours without a cut in pay.

Article 20. The citizens of the Socialist Republic of Romania have the right to material security for old age, sickness, or inability to work.

The right to material security is implemented for workers and functionaries through pensions and sickness benefits granted within the system of state social insurance and for the members of the cooperative organizations or of other public organizations through the forms of insurance set up by them. The state provides medical assistance through its health institutions.

Paid maternity leave is guaranteed.

Article 21. The citizens of the Socialist Republic of Romania have the right to education.

The right to education is ensured through compulsory general education, through free education of all grades, and through the system of state scholarships.

Education in the Socialist Republic of Romania is state education.

Article 22. In the Socialist Republic of Romania, the free use of the mother tongue, as well as books, newspapers, magazines, theaters, and education of all grades in their own language, are provided to the coinhabiting nationalities. In the territorial-administrative units also inhabited by a population of a nationality other than Romanian, all bodies and institutions also use in speech and in writing the language of the respective nationality and appoint functionaries from its ranks or from among other citizens who know the language and the way of life of the local population.

Article 23. In the Socialist Republic of Romania the woman has equal rights with the man.

The state protects marriage and the family and defends the interests of the mother and the child.

Article 24. The Socialist Republic of Romania provides to the young people the conditions needed for developing their physical and mental aptitudes.

Article 25. The citizens of the Socialist Republic of Romania have the right to elect and to be elected to the Grand National Assembly and the people's councils.

The vote is universal, equal, direct, and secret. All citizens who have reached the age of 18 years have a right to vote.

The citizens with a right to vote who have reached the age of 23 years can be elected as deputies to the Grand National Assembly and the people's councils.

The right to nominate candidates belongs to the Socialist Democracy and Unity Front, the broadest permanent revolutionary and democratic political body of a representative character, which constitutes the organizational framework for uniting, under the Romanian Communist Party's leadership, our socialist nation's political and social forces and all the mass and public organizations, for the participation of all the people in implementing the domestic and foreign policy of the party and state and in managing all fields of activity.

The voters have the right to recall a deputy at any time, in accordance with the procedure provided by law.

The mentally ill and deficient and the persons deprived of these rights for the period set through a judicial sentence do not have the right to elect or to be elected.

Article 26. The most advanced and aware citizens from among the workers, peasants, intellectuals, and other categories of working people are united in

the Romanian Communist Party, the highest form of organization of the working class and its vanguard detachment.

The Romanian Communist Party expresses and faithfully serves the vital interests and aspirations of the people, plays the leading role in all fields of socialist construction, and guides the activity of the mass and public organizations and of the state bodies.

Article 27. The citizens of the Socialist Republic of Romania have the right to associate in trade-union, cooperative, youth, women's, and social and cultural organizations, in creative unions and scientific, technical, and sports associations, and in other public organizations.

The state supports the activity of the mass and public organizations, creates conditions for developing the material base of these organizations, and protects their property.

The mass and public organizations provide for the broad participation of the masses in the political, economic, social, and cultural life of the Socialist Republic of Romania and in the exercise of public control--an expression of the democratism of the socialist order. Through the mass and public organizations, the Romanian Communist Party achieves an organized link with the working class, peasantry, intelligentsia, and other categories of working people, mobilizing them for the effort to complete the construction of socialism.

Article 28. The freedom of speech, of the press, of assembly, of meeting, and of demonstration is guaranteed to the citizens of the Socialist Republic of Romania.

Article 29. The freedom of speech, of the press, of assembly, of meeting, and of demonstration cannot be used for purposes hostile to the socialist order and to the interests of those who work.

Any association of a fascist or antidemocratic character is prohibited. Participation in such associations and propaganda of a fascist or antidemocratic character are punished by law.

Article 30. The freedom of conscience is guaranteed to all citizens of the Socialist Republic of Romania.

Anyone is free to share or not share a religious belief. The freedom to follow a religious cult is guaranteed. The religious cults are organized and operate freely. The manner of organization and operation of the religious cults is regulated by law.

The school is separate from the church. No religious denomination, congregation, or community can open or maintain other educational institutions than special schools for the training of cult personnel.

Article 31. The inviolability of the person is guaranteed to the citizens of the Socialist Republic of Romania.

No person can be detained or arrested if solid proof or indications that he committed an act specified and punished by law do not exist against him. The investigative bodies can order the detention of a person for a period of at most 24 hours. No one can be arrested except on the basis of a warrant for arrest issued by a court or a public prosecutor.

The right to a defense is guaranteed throughout the trial.

Article 32. The domicile is inviolable. No one can enter a person's dwelling without his permission, except in the cases and under the conditions specifically provided by law.

Article 33. The secrecy of correspondence and of telephone conversations is guaranteed.

Article 34. The right to petition is guaranteed. The state bodies have the obligation to resolve the petitions of the citizens concerning personal or public rights and interests.

Article 35. A person harmed in a right of his through an illegal act of a state body can ask the competent bodies, under the conditions provided by law, to nullify the act and to repair the damage.

Article 36. The right to personal property is protected by law.

The incomes and savings derived from work, the house, the yard around it, and the land on which they stand, and the goods for personal use and comfort can constitute an object of the right to personal property.

Article 37. The right of inheritance is protected by law.

Article 38. The Socialist Republic of Romania grants the right of asylum to foreign citizens persecuted for their activity in defense of the interests of those who work and for participation in the struggle for national liberation or in defense of peace.

Article 39. Each citizen of the Socialist Republic of Romania is obliged to observe the constitution and the laws, to protect socialist property, and to contribute to the strengthening and development of the socialist order.

Article 40. Military service in the ranks of the Armed Forces of the Socialist Republic of Romania is compulsory and constitutes a duty of honor of the citizens of the Socialist Republic of Romania.

Article 41. The defense of the homeland is the sacred duty of each citizen of the Socialist Republic of Romania. Violation of the military oath, treason against the homeland, desertion to the enemy, and prejudice to the defensive capacity of the state constitute the most serious crimes against the people and are punished by law with the utmost severity.

Title III
The Supreme Bodies of State Power

The Grand National Assembly

Article 42. The Grand National Assembly, the supreme body of state power, is the sole legislative body of the Socialist Republic of Romania.

Article 43. The Grand National Assembly has the following main powers:

1. It adopts and amends the Constitution of the Socialist Republic of Romania;

2. It regulates the electoral system;

3. It decides on consulting the people, through a referendum, about the measures of particular importance that concern supreme interests of the country;

4. It adopts the sole national plan for economic and social development, the state budget, and the general account for concluding the budgetary year;

5. It organizes the Council of Ministers; it establishes the general norms for organizing and operating the ministries and the other central state bodies;

6. It regulates the organization of the judiciary and of the Public Prosecutor's Office;

7. It establishes the norms for organizing and operating the people's councils;

8. It establishes the administrative organization of the territory;

9. It grants amnesty;

10. It ratifies and denounces international treaties that entail the modification of laws;

11. It elects and recalls the president of the Socialist Republic of Romania;

12. It elects and recalls the State Council;

13. It elects and recalls the Council of Ministers;

14. It elects and recalls the Supreme Court and the prosecutor general;

15. It exercises general control over the application of the constitution. Only the Grand National Assembly decides on the constitutionality of laws;

16. It oversees the activity of the president of the Socialist Republic of Romania and of the State Council;

17. It oversees the activity of the Council of Ministers, of the ministries, and of the other central bodies of state administration;

18. It hears reports on the activity of the Supreme Court and oversees its prescriptive rulings;

19. It oversees the activity of the Public Prosecutor's Office;

20. It exercises general control over the activity of the people's councils;

21. It establishes the general line of the foreign policy;

22. In the interest of the defense of the country, of public order, or of the security of the state, it proclaims a state of emergency, in some localities or throughout the territory of the country;

23. It declares a partial or general mobilization;

24. It declares a state of war. A state of war can be declared only in the case of armed aggression against the Socialist Republic of Romania or against another state to which the Socialist Republic of Romania has mutual-defense obligations assumed through international treaties, if a situation has arisen for which the obligation to declare a state of war is specified.

Article 44. The deputies to the Grand National Assembly are elected according to electoral districts having the same number of inhabitants.

The representational norm for electing the deputies and the delimitation of the electoral districts are established through a decree of the State Council.

One deputy is elected in each electoral district.

Article 45. The Grand National Assembly is elected for a term of 5 years.

The mandate of the Grand National Assembly cannot cease before the expiration of the term for which it was elected. The mandate ceases on the date of the holding of the elections for the new Grand National Assembly.

In the case when it ascertains the existence of circumstances that make it impossible to hold the elections, the Grand National Assembly can decide to extend its mandate for the duration of these circumstances.

Article 46. The elections for the Grand National Assembly are held on one of the nonworkdays in March of the year in which the preceding term ends. In the case mentioned in Article 45, paragraph 3, the elections are held within 2 months after the expiration of the period for which the mandate of the Grand National Assembly was extended.

The newly elected Grand National Assembly is convened during the next 3 months after the cessation of the mandate of the preceding Grand National Assembly.

Article 47. The Grand National Assembly verifies the legality of the election of each deputy, deciding on the validation or annulment of the election.

In the case of an annulled election, the rights and duties of the deputy cease from the moment of the annulment.

Article 48. The Grand National Assembly adopts its operating regulations.

Article 49. The Grand National Assembly establishes its annual budget, which is included in the state budget.

Article 50. The Grand National Assembly elects, for the duration of the term, the Bureau of the Grand National Assembly, composed of the chairman of the Grand National Assembly and four vice chairmen.

Article 51. The chairman of the Grand National Assembly conducts the proceedings of the sessions of the Grand National Assembly.

The chairman of the Grand National Assembly can designate any of the vice chairmen to fulfill some of his duties.

Article 52. The Grand National Assembly elects standing committees from among the deputies.

The standing committees examine and discuss, on the charge of the Grand National Assembly or the State Council, drafts of laws, of decrees, of decisions, or of other acts that are to be adopted and any other matters.

In addition, on the charge of the Grand National Assembly or the State Council, the standing committees hear, periodically or according to problems, each in conformity with its jurisdiction, reports of the heads of any bodies of state administration, the Supreme Court, and the Public Prosecutor's Office on the activity of these bodies and reports of the chairmen of the executive committees or executive bureaus of the people's councils on the activity of these councils and analyze the way in which the above-mentioned bodies implement the policy of the Romanian Communist Party and secure the application of the law.

The committees prepare reports, opinions, or proposals concerning all matters mentioned in paragraphs 2 and 3, which they submit to the Grand National Assembly or the State Council.

The Grand National Assembly can elect temporary committees for any matters or fields of activity, establishing the powers and the mode of activity of each of these committees.

All state bodies and functionaries have the obligation to put at the disposal of the committees of the Grand National Assembly the information and documents requested.

Article 53. In exercising control of the constitutionality of laws and for preparing the works concerning the adoption of laws, the Grand National Assembly elects for the duration of the term a constitutional and legal committee.

Experts who are not deputies can be elected to the constitutional and legal committee--without exceeding one-third of the total number of members of the committee.

The constitutional and legal committee submits to the Grand National Assembly reports or opinions on the constitutionality of laws. It also examines the constitutionality of the decrees that contain norms with the force of law and the decisions of the Council of Ministers, in accordance with the Operating Regulations of the Grand National Assembly.

The provisions of Article 52 also apply accordingly to the constitutional and legal committee.

Article 54. The Grand National Assembly works in sessions.

The ordinary sessions of the Grand National Assembly are convened twice a year, at the proposal of the Bureau of the Grand National Assembly.

The Grand National Assembly is convened, whenever necessary, in extraordinary sessions, on the initiative of the State Council, the Bureau of the Grand National Assembly, or of at least one-third of the total number of deputies.

The convocation of Grand National Assembly in sessions is done through a decree of the State Council.

Article 55. The Grand National Assembly works only if at least one-half plus one of the total number of deputies are present.

Article 56. The Grand National Assembly adopts laws and decisions.

The laws and decisions are adopted if they get the vote of the majority of the deputies to the Grand National Assembly.

The constitution is adopted and amended with the vote of at least two-thirds of the total number of deputies to the Grand National Assembly.

The laws and decisions of the Grand National Assembly are signed by the chairman or the vice chairman of the Grand National Assembly who conducted the session.

Article 57. After their adoption by the Grand National Assembly, the laws are published in BULETINUL OFICIAL AL REPUBLICII SOCIALISTE ROMANIA within at most 10 days, signed by the president of the Socialist Republic of Romania.

Article 58. Each deputy to the Grand National Assembly has the right to put questions and to address interpellations to the Council of Ministers or any of its members.

Within the framework of the control exercised by the Grand National Assembly, a deputy can put questions and address interpellations to the president of the Supreme Court and to the prosecutor general.

A person questioned or interpellated has the obligation to respond in speech or in writing within at most 3 days and, in any case, during the same session.

Article 59. With a view to preparing for the discussions of the Grand National Assembly or the interpellations, a deputy has the right to request the necessary information from any state body, applying for this purpose to the Bureau of the Grand National Assembly.

Article 60. Each deputy is obligated to periodically present to the voters reports on his own activity and that of the Grand National Assembly.

Article 61. No deputy to the Grand National Assembly can be detained, arrested, or arraigned without the prior consent of the Grand National Assembly during the session and of the State Council between sessions.

A deputy can be detained without this consent only in the case of a flagrant offense.

The State Council

Article 62. The State Council of the Socialist Republic of Romania is the supreme body of state power with permanent activity; it is subordinate to the Grand National Assembly.

Article 63. The State Council permanently exercises the following main powers:

1. It establishes the date of the elections for the Grand National Assembly and the people's councils;

2. It establishes the manner of organizing and holding the referendum;

3. It organizes the ministries and the other central state bodies;

4. It ratifies and denounces international treaties, with the exception of those whose ratification lies within the competence of the Grand National Assembly;

5. It establishes military ranks;

6. It institutes decorations and titles of honor.

Article 64. The State Council exercises, in the interval between the sessions of the Grand National Assembly, the following main powers:

1. It establishes, without being able to change the constitution, norms with the force of law. The norms with the force of law are submitted, in the first session, for discussion by the Grand National Assembly, in accordance with the procedure for adoption of laws. The sole national plan for economic and social development, the state budget, and the general account for concluding the

budgetary year can be adopted by the State Council only when the Grand National Assembly cannot meet due to exceptional circumstances;

2. It appoints and recalls the prime minister;

3. It appoints and recalls the Council of Ministers and the Supreme Court when the Grand National Assembly cannot meet due to exceptional circumstances;

4. It gives to the laws in force the general and compulsory interpretation;

5. It grants amnesty;

6. It oversees the application of the laws and decisions of the Grand National Assembly, the activity of the Council of Ministers, of the ministries, and of the other central bodies of state administration, and the activity of the Public Prosecutor's Office; it hears reports of the Supreme Court and oversees its prescriptive rulings; it oversees the decisions of the people's councils;

7. It declares, in case of emergency, a partial or general mobilization;

8. It declares, in case of emergency, a state of war. A state of war can be declared only in the case of armed aggression against the Socialist Republic of Romania or against another state to which the Socialist Republic of Romania has mutual-defense obligations assumed through international treaties, if a situation has arisen for which the obligation to declare a state of war is specified.

The powers mentioned in the present article can also be exercised by the State Council during the sessions of the Grand National Assembly in the case in which the economic and social necessities require the immediate adoption of measures and the Grand National Assembly is not assembled in its plenum; the norms with the force of law adopted are submitted for discussion by the Grand National Assembly, in accordance with the procedure for adoption of laws, on the resumption of the plenary session.

Article 65. The State Council is elected by the Grand National Assembly from among its members, for the duration of the term, in its first session. The State Council operates until the election of the new State Council in the next term.

Article 66. The president of the Socialist Republic of Romania is chairman of the State Council.

Article 67. The State Council is composed of a chairman, vice chairmen, and members.

Article 68. The State Council performs its activity in accordance with the principle of collective leadership.

Article 69. The State Council issues decrees and adopts decisions.

The decrees and decisions are signed by the president of the Socialist Republic of Romania. The normative decrees are published in BULETINUL OFICIAL AL REPUBLICII SOCIALISTE ROMANIA.

Article 70. The State Council presents to the Grand National Assembly reports on the exercise of its powers and on the observance and execution, in state activity, of the laws and decisions of the Grand National Assembly.

The State Council in its entirety and each of its members are responsible to the Grand National Assembly for the entire activity of the State Council.

The President of the Socialist Republic of Romania

Article 71. The president of Socialist Republic of Romania is the head of state and represents the state power in the domestic and foreign relations of the Socialist Republic of Romania.

Article 72. The president of the Socialist Republic of Romania is elected by the Grand National Assembly for the duration of the term, in its first session, and remains in office until the election of the president in the next term.

Article 73. On his election, the president of the Socialist Republic of Romania takes the following oath before the Grand National Assembly:

"I swear to faithfully serve the homeland and to firmly act in defense of the independence, sovereignty, and integrity of the country, for the well-being and happiness of all the people, and for the building of socialism and communism in the Socialist Republic of Romania!

"I swear to observe and defend the constitution and the laws of the country and to do everything for the consistent application of the principles of socialist democracy and for the affirmation of the norms of socialist ethics and equity in the life of society!

"I swear to unswervingly promote the foreign policy of friendship and alliance with all the socialist countries, of collaboration with all the nations of the world, regardless of social order, on the basis of fully equal rights, of solidarity with the revolutionary, progressive forces everywhere, and of peace and friendship among peoples!

"I swear that I will always do my duty with honor and devotion for the glory and greatness of our socialist nation, the Socialist Republic of Romania!"

Article 74. The president of the Socialist Republic of Romania is the supreme commander of the Armed Forces and the chairman of the Defense Council of the Socialist Republic of Romania.

Article 75. The president of the Socialist Republic of Romania fulfills, in conformity with the constitution and the laws, the following main duties:

1. He presides over the State Council;

2. He presides over the meetings of the Council of Ministers when this is necessary;

3. He establishes the measures of particular importance that concern supreme interests of the country that are to be submitted by the Grand National Assembly to the people for consultation, through a referendum;

4. He appoints and removes, at the prime minister's proposal, the deputy prime ministers, the ministers, and the chairmen of other central bodies of state administration who belong to the Council of Ministers; he appoints and removes the heads of central state bodies who do not belong to the Council of Ministers; he appoints and removes the members of the Supreme Court.

5. When the Grand National Assembly is not assembled in its plenum, he appoints and removes the president of the Supreme Court and the prosecutor general;

6. He confers the ranks of general, admiral, and marshal;

7. He awards decorations and titles of honor; he authorizes the wearing of the decorations awarded by other states;

8. He grants pardon;

9. He grants citizenship, approves the renunciation of citizenship, and withdraws Romanian citizenship; he approves the establishment of the domicile in Romania for the citizens of other states;

10. He grants the right of asylum;

11. He establishes the ranks of the diplomatic missions; he accredits and recalls the diplomatic representatives of the Socialist Republic of Romania;

12. He receives the letters of credence and of recall of the diplomatic representatives of other states;

13. He concludes international treaties on behalf of the Socialist Republic of Romania; he can empower for this purpose the prime minister or members of the Council of Ministers or diplomatic representatives;

14. In the interest of the defense of the Socialist Republic of Romania, of the securing of public order, or of the security of the state, he proclaims, in case of need, in some localities or throughout the territory of the country, a state of emergency.

In fulfilling his duties, the president of the Socialist Republic of Romania issues decisions and presidential decrees.

Article 76. The president of the Socialist Republic of Romania is responsible to the Grand National Assembly for his entire activity.

The president of the Socialist Republic of Romania periodically presents to the Grand National Assembly reports on the exercise of his prerogatives and on the development of the state.

Title IV
The Central Bodies of State Administration

Article 77. The Council of Ministers is the supreme body of state administration.

The Council of Ministers exercises the general guidance of the executive activity throughout the country's territory, having the following main powers:

1. It establishes general measures for the implementation of the domestic and foreign policy;

2. It decides on the measures necessary for organizing and securing the execution of the laws;

3. It directs, coordinates, and oversees the activity of the ministries and of the other central bodies of state administration;

4. It prepares the draft of the sole national plan for economic and social development, the draft of the state budget, and any other bills; it prepares draft decrees;

5. It establishes measures for the implementation of the sole national plan for economic and social development and of the state budget; it prepares the general report on the fulfillment of the sole national plan for economic and social development and the general account for concluding the budgetary year;

6. It sets up economic organizations, enterprises, and state institutions of national interest;

7. It takes steps to secure public order, to defend the interests of the state, and to protect the rights of the citizens;

8. It takes steps, in accordance with the decisions of the Defense Council, regarding the general organization of the Armed Forces and the setting of the annual contingents of citizens who are to be called up to fulfill military service;

9. It exercises the general guidance in the field of relations with other states and takes steps to conclude international agreements;

10. It supports the activity of the mass and public organizations;

11. It exercises, under the conditions of the law, its powers of guidance and oversight of the activity of the executive committees and executive bureaus of the people's councils.

Article 78. The Council of Ministers is elected by the Grand National Assembly, for the duration of the term, in its first session. The Council of Ministers operates until the election of the new Council of Ministers in the next term.

Article 79. In fulfilling its duties, the Council of Ministers adopts decisions on the basis of and with a view to the execution of the laws.

The decisions of a normative character are published in BULETINUL OFICIAL AL REPUBLICII SOCIALISTE ROMANIA.

Article 80. The Council of Ministers is composed of: the prime minister, the deputy prime ministers, the ministers, the ministers state secretaries, and the chairmen of other bodies of state administration specified by law.

The chairman of the Central Council of the General Union of Trade Unions, the chairman of the National Union of Agricultural Production Cooperatives, the chairwoman of the National Council of Women, and the first secretary of the Central Committee of the Union of Communist Youth also belong to the Council of Ministers.

The Council of Ministers can set up an executive bureau for promptly solving the current problems and pursuing the execution of the decisions of the Council of Ministers.

Article 81. The Council of Ministers performs its activity in accordance with the principle of collective leadership, securing the unity of political and administrative action of the ministries and the other central bodies of state administration.

Article 82. The Council of Ministers in its entirety and each of its members are responsible to the Grand National Assembly and, in the interval between sessions, to the State Council. Each member of the Council of Ministers is responsible both for his own activity and for the entire activity of the Council of Ministers.

Article 83. The ministries and the other central bodies of state administration implement the state's policy in the branches or fields of activity for which they were set up.

They direct, guide, and oversee the enterprises, economic organizations, and state institutions subordinate to them.

Article 84. The ministers and the heads of the other central bodies of state administration issue, on the basis of and with a view to the execution of the laws and the decisions of the Council of Ministers, instructions, orders, and

other acts provided by law; their acts of a normative character are published in BULETINUL OFICIAL AL REPUBLICII SOCIALISTE ROMANIA.

Article 85. The ministers and the heads of the other central bodies of state administration are responsible to the Council of Ministers for the activity of the bodies that they direct.

Title V
The Local Bodies of State Power and the Local Bodies of State Administration

Article 86. The people's councils are the local bodies of state power in the territorial-administrative units in which they were elected.

The people's councils direct the local activity, securing the economic, social and cultural, and municipal administrative development of the territorial-administrative units in which they were elected, the protection of socialist property, the protection of the rights of the citizens, socialist legality, and the maintenance of public order.

The people's councils organize the participation of the citizens in the resolution of state and public affairs on a local level.

Article 87. The people's council exercises the following main powers:

1. It adopts the local economic plan and budget and approves the account for concluding the budgetary year;

2. It elects and recalls the executive committee or executive bureau, as the case may be, of the people's council;

3. It sets up economic organizations, enterprises, and state institutions of local interest;

4. It directs, guides, and oversees the activity of its executive committee or executive bureau, as the case may be, of the specialized local bodies of state administration, and of the subordinate economic organizations, enterprises, and institutions;

5. It oversees the decisions of the lower-ranking people's councils;

6. It elects and recalls, in accordance with the law, the judges, the people's assessors, and the chief prosecutor of the county or of the municipality of Bucharest.

Article 88. The people's councils are composed of deputies elected according to electoral districts, with one deputy for each district.

The electoral districts formed for the election of the deputies to a people's council have the same number of inhabitants.

The duration of the mandate of the county people's councils and of that of the municipality of Bucharest is 5 years, and the duration of the mandate of the municipal people's councils, of those of the sectors of the municipality of Bucharest, and of the city and communal people's councils is 2 and 1/2 years.

The date of the elections for the people's councils is set in accordance with the law.

Article 89. The people's councils elect, from among the deputies, standing committees that help them to perform their tasks.

Article 90. The people's councils work in sessions; the convocation in sessions is done by the executive committee or executive bureau, as the case may be, of the people's council.

The people's councils are convened in extraordinary sessions whenever necessary, on the initiative of the executive committee or executive bureau, as the case may be, or of at least one-third of the total number of deputies.

Article 91. The people's councils work in the presence of at least one-half plus one of the total number of deputies.

Article 92. Each deputy is obligated to periodically present to the voters reports on his own activity and on that of the people's council to which he was elected.

Article 93. The people's councils adopt decisions.

A decision is adopted if it gets the vote of the majority of the deputies to the people's council.

The decisions of a normative character are brought to the cognizance of the citizens in the forms provided by law.

Article 94. The executive committee of the people's council and the executive bureau of the people's council are local bodies of state administration with general jurisdiction in the territorial-administrative unit in which the people's council was elected.

Article 95. The executive committee of the people's council and the executive bureau of the people's council have the following main duties:

1. They implement the laws, the decrees, and the decisions of the Council of Ministers and other acts of the higher bodies;

2. They execute the decisions of the people's councils that elected them;

3. They prepare the draft local economic plan and the draft local budget;

4. They execute the local economic plan and budget and prepare the report on the fulfillment of the local economic plan and the account for concluding the budgetary year;

5. They direct, guide, and oversee the activity of the specialized local bodies of state administration;

6. They direct, guide, coordinate, and oversee the activity of the subordinate economic organizations, enterprises, and institutions;

7. They direct, guide, and oversee the activity of the executive committees or executive bureaus, as the case may be, of the people's councils ranking lower than the people's councils that elected them.

In the interval between the people's council's sessions, the executive committee or executive bureau, as the case may be, also fulfills its duties, with the exception of those mentioned in Article 87, points 1, 2, 3, 4, 5, and 6, submitting the decisions adopted to the people's council for ratification in its first session.

Article 96. The county people's councils, that of the municipality of Bucharest, those of its sectors, and those of the municipalities elect executive committees, and the people's councils of the cities and communes elect executive bureaus.

The executive committee or executive bureau is elected from among the deputies to the people's council in the first session after elections, for the duration of the mandate of that council.

After the cessation of the people's council's mandate, the executive committee or executive bureau, as the case may be, continues to operate until the election of the new executive committee or executive bureau.

Article 97. The executive committee or executive bureau of the people's council is composed, in accordance with the law, of a chairman, one or more vice chairmen, and other members.

Article 98. In exercising its powers, the executive committee or executive bureau of the people's council issues decisions on the basis of and with a view to the execution of the law.

The decisions of a normative character are brought to the cognizance of the citizens in the forms provided by law.

Article 99. The executive committee and executive bureau perform their activity in accordance with the principle of collective leadership.

The executive committee or executive bureau in its entirety and each of its members are responsible to the people's council that elected them, to the executive committee or executive bureau of the higher-ranking people's council, and to the Council of Ministers.

Each member of the executive committee or executive bureau is responsible for his own activity and for the entire activity of the body to which he belongs.

Article 100. The people's councils organize, in accordance with the law, specialized local bodies of state administration under their executive committees or executive bureaus, as the case may be. The specialized local bodies of state administration are subordinate both to the people's council and the executive committee or executive bureau, as the case may be, and to the higher-ranking local and central bodies of state administration.

Title VI
The Judicial Bodies

Article 101. In the Socialist Republic of Romania, justice is administered, in accordance with the law, through the Supreme Court, the county courts, the local courts, and the military courts.

Article 102. Through the judicial activity, the county courts and local courts defend the socialist order and the rights of persons, educating the citizens in the spirit of respect for the law.

By applying punitive sanctions, the county courts and local courts seek to reform and reeducate the offenders and prevent the commission of new offenses.

Article 103. The county courts and local courts try the civil and criminal cases and any other cases put under their jurisdiction.

In the cases provided by law, the county courts and local courts exercise control over the decisions of the administrative or public bodies with jurisdictional activity.

The county courts and local courts hear the suits of those harmed in their rights through administrative acts, also being able, under the conditions provided by law, to pronounce on the legality of those acts.

Article 104. The Supreme Court exercises general control over the judicial activity of all the county courts and local courts. The manner of exercising this control is established by law.

With a view to securing the uniform application of the laws in the judicial activity, the Supreme Court issues, in its plenum, prescriptive rulings.

Article 105. The Supreme Court is elected by the Grand National Assembly for the duration of the term, in its first session.

The Supreme Court operates until the election of the new Supreme Court in the next term.

Article 106. The Supreme Court is responsible for its activity to the Grand National Assembly and, between sessions, to the State Council.

Article 107. The organization of the county courts and local courts, their jurisdiction, and the judicial procedure are established by law.

The trying of the cases in the first instance in the county courts, local courts, and military courts is done with the participation of the people's assessors, except in the cases when the law orders otherwise.

Article 108. The judges and the people's assessors are elected in conformity with the procedure established by law.

Article 109. In the Socialist Republic of Romania, the court proceedings are conducted in the Romanian language, there being provided, in the territorial-administrative units also inhabited by a population of a nationality other than Romanian, the use of the mother tongue of that population.

The opportunity to become acquainted with the facts of the case through an interpreter and the right to speak in court and to sum up in the mother tongue are provided to the parties who do not speak the language in which the court proceedings are conducted.

Article 110. The trial is held in a public session, with the exception of the cases provided by law.

Article 111. In their judicial activity, the judges and the people's assessors are independent and are subject only to the law.

Title VII
The Bodies of the Public Prosecutor's Office

Article 112. The Public Prosecutor's Office of the Socialist Republic of Romania exercises supervision over the activity of the bodies of penal prosecution and of execution of penalties and, under the conditions of the law, sees to the observance of legality and the defense of the socialist order, of the legitimate rights and interests of the socialist organizations, of the other juridical persons, and of the citizens.

Article 113. The Public Prosecutor's Office is headed by the prosecutor general. The bodies of the Public Prosecutor's Office are: the Prosecutor General's Office, the county prosecutor's offices, the local prosecutor's offices, and the military prosecutor's offices.

The bodies of the Public Prosecutor's Office are hierarchically subordinate.

Article 114. The prosecutor general is elected by the Grand National Assembly for the duration of the term, in its first session, and operates until the election of the new prosecutor general in the first session of the next term.

The public prosecutors are appointed in accordance with the law, with the exception of those mentioned in Article 87, point 6.

Article 115. The prosecutor general is responsible to the Grand National Assembly and, between sessions, to the State Council for the activity of the Public Prosecutor's Office.

Title VIII
The Insignia of the Socialist Republic of Romania

Article 116. The emblem of the Socialist Republic of Romania represents wooded mountains over which the sun is rising. On the left side of the emblem there is an oil derrick. The emblem is framed by a wreath of wheatears. In the upper part of the emblem there is a five-pointed star. In the lower part of the emblem, the wheatears are wrapped in a tricolor ribbon on which is written "Republica Socialista Romania" [Socialist Republic of Romania].

Article 117. On the seal of the state is represented the country's emblem, around which is written "Republica Socialista Romania."

Article 118. The flag of the Socialist Republic of Romania bears the colors red, yellow, and blue, placed vertically, with the blue next to the staff. The emblem of the Socialist Republic of Romania is placed in the center.

Article 119. The state anthem of the Socialist Republic of Romania is approved by the Grand National Assembly.

Title IX
Final Provisions

Article 120. The present constitution goes into effect on the date of its adoption.

Article 121, The constitution of 24 September 1952 and any provisions of laws, decrees, and other regulatory acts contrary to the provisions of the present constitution are repealed on the same date.

Note:

The Constitution of the Socialist Republic of Romania was adopted by the Grand National Assembly on 21 August 1965 and was published in BULETINUL OFICIAL AL REPUBLICII SOCIALISTE ROMANIA, Part I, No 1, 21 August 1965.

The constitution has been amended and republished as follows:

Amended by Law No 1/1968 (published in BULETINUL OFICIAL, No 16, 16 February 1968) and republished in BULETINUL OFICIAL, No 22, 20 February 1968;

Amended by Law No 56/1968 (published in BULETINUL OFICIAL, No 168, 26 December 1968) and by Law No 1/1969 (published in BULETINUL OFICIAL, No 31, 13 March 1969) and republished in BULETINUL OFICIAL, No 34, 16 March 1969;

Amended by Law No 26/1971 (published in BULETINUL OFICIAL, No 157, 17 December 1971) and by Law No 1/1972 (published in BULETINUL OFICIAL, No 41, 24 April 1972) and republished in BULETINUL OFICIAL, No 44, 4 May 1972;

Amended by Law No 1/1974 (published in BULETINUL OFICIAL, No 45, 28 March 1974) and republished in BULETINUL OFICIAL, No 56, 8 April 1974;

Amended by Law No 66/1974 (published in BULETINUL OFICIAL, No 161, 23 December 1974) and republished in BULETINUL OFICIAL, No 167, 27 December 1974;

Amended by Law No 21/1975 (published in BULETINUL OFICIAL, No 30, 21 March 1975);

Amended by Law No 19/1979 (published in BULETINUL OFICIAL, No 103, 19 December 1979);

Amended by Law No 19/1986 (published in BULETINUL OFICIAL, No 64, 27 October 1986) and republished in the same issue of the bulletin.

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ORGANIZATION, OPERATION OF STATE COMMITTEE FOR PRICES

Bucharest BULETINUL OFICIAL in Romanian Part I No 68, 5 Nov 86 pp 1-4

[Decree of the State Council on the Organization and Operation of the State Committee for Prices]

The State Council of the Socialist Republic of Romania decrees:

Chapter I
General Provisions

Article 1. The State Committee for Prices, a central body of the state administration, bears the full responsibility for the unitary implementation of the party and state's policy in the field of prices and rates.

Article 2. The State Committee for Prices is responsible for the implementation of the party directives and decisions and the legal regulations in the field of the setting of the domestic prices and rates and foreign prices and rates for the products and services contained in the sole national plan for economic and social development.

Article 3. The State Committee for Prices provides at the level of the whole economy the supervision, guidance, and unitary coordination of the activity of the ministries, other central bodies, local bodies, centrals, and enterprises in the field of the setting and application of prices and rates.

Article 4. In its activity, the State Committee for Prices provides for the application of the laws, the decrees, and the decisions of the Council of Ministers.

Article 5. The State Committee for Prices collaborates with the ministries, the other central bodies, and the local bodies to perform the duties that devolve upon it.

Article 6. The State Committee for Prices performs mainly the duties established by means of the present decree.

Section 1
Duties in the Field of Domestic Prices and Rates

Article 7. The State Committee for Prices is responsible, in accordance with the law, for the way in which the policy on domestic prices and rates is implemented throughout the national economy, to which end:

a) It establishes and is responsible for the preparation of the norms regarding the setting of prices and rates, securing the continual improvement of the price system;

b) Together with the State Planning Committee, the Ministry of Finance, and the other ministries and central bodies, it is responsible for the preparation of the economic and financial standards regarding the unit cost per product, which should reflect the continual reduction of production costs in conformity with the measures established as part of the actions to organize and modernize production and labor;

c) Together with the State Planning Committee, the Ministry of Finance, and the banks, it establishes the measures necessary for continually reducing the costs contained in the economic and financial standards according to product, by:

Reducing the weight of the products per unit of useful effect;

Raising the coefficient of utilization of raw materials and supplies under the conditions of advanced treatment of them;

Reducing the consumption of materials coming from importation;

Raising the percentage of raw materials and supplies from recovery activities;

Reducing to the utmost the consumption of fuel and electric power per unit of product;

Reducing per unit of product the amortization and repair expenses, in conformity with the approved indices for use of machinery and equipment, in accordance with the plan provisions;

Raising the degree of integration of the products;

Raising the labor productivity expressed in man-hours per product, set on the basis of labor norms approved according to operations and products;

d) It acts with the ministries, the other central bodies, and the local bodies so that the prices and rates of new products and services may be set:

In strict accordance with the provisions of the law and on the basis, as a maximum limit, of the prescribed production costs, approved by means of the plan, and the economic and financial standards regarding the unit cost per product;

Under the conditions of profitably manufacturing the products and performing the services, securing at least the profitability level existing in the price of the correlated products, according to the group to which the new product belongs or according to enterprise, as the case may be;

Within the limit of the level resulting from the comparison of the use value of new products and services with that of similar ones existing in the country and on a world level, so as to ensure that the prices and rates of new products and services fit into the existing price scale;

So as to contribute to the growth in economic efficiency both for the producer and for the consumers of the respective products and in competitiveness in exportation and to the reduction of the investment;

e) It sets the level of the prices and rates of the products and services whose prices and rates are approved, in accordance with the law, by means of a decree of the State Council, a presidential decree, or a decision of the Council of Ministers, as the case may be;

f) It sets the level of the prices and rates of the products and services whose prices and rates are approved, in accordance with the law, by ministries, other central bodies, and local bodies;

g) It sets the level of the prices of the new products provided in the technical and economic documentation of new production capacities;

h) Together with the other central bodies and the local bodies, it sees that and acts so that the general level of the prices and rates evolves strictly within the limits approved by means of the plan;

i) Together with the ministries and the other central bodies, it prepares proposals regarding the changes that must be made in the level and correlation of prices and rates, taking into account the evolution of the costs and foreign import prices of basic raw materials;

j) In collaboration with the ministries and the other central bodies, it prepares draft plans regarding the development of prices and long-term forecasts regarding the evolution of the prices and rates of products and services of particular importance to the national economy and to the standard of living of the population;

k) Together with the ministries, the other central bodies, and the local bodies, it analyzes the influence of prices and rates on the development and diversification of production, normal commodity circulation, consumption, advanced utilization of resources and growth in the efficiency of economic activity, and the standard of living of the population, taking or proposing, in accordance with their legal prerogatives, the suitable steps;

l) Together with the ministries, the other central bodies, and the local bodies, it prepares studies and proposals for improving the system, level, and correlations of prices and rates in the national economy.

Section 2
Duties in the Field of Foreign Prices and Rates

Article 8. The State Committee for Prices is responsible for the implementation of the party directives and decisions and the country's laws on the setting of foreign prices and rates, to which end:

a) Together with the State Planning Committee, the Ministry of Finance, and the Ministry of Foreign Trade and International Economic Cooperation, it sets, on the basis of the proposals of the ministries and the other central bodies, the level of the foreign prices and rates and the rates of return for exported and imported goods and for construction-assembly work and services performed abroad, seeing that they provide growth in the efficiency of exportation, importation, and work and services performed abroad, through the obtaining of favorable foreign prices and rates and the marketing of products that offer advanced utilization of raw materials and labor.

The level of the foreign prices and rates and of the rates of return and the levels of utilization in exportation are submitted for approval, in accordance with the law, and are included in the annual and 5-year plans;

b) Together with the economic ministries, the Ministry of Foreign Trade and International Economic Cooperation, the State Planning Committee, and the Ministry of Finance, it takes steps to fit exportation and importation into the planned foreign prices and rates of return.

The Ministry of Foreign Trade and International Economic Cooperation will issue export and import permits for each particular transaction only for the products for which the foreign prices obtained fit into the approved price. In the situations in which the approved foreign prices are not attained, the conclusion of the international business transactions will be done on the basis of the approval given in accordance with the law, at the proposal of the State Committee for Prices, the Ministry of Finance, the State Planning Committee, and the Ministry of Foreign Trade and International Economic Cooperation, adopted by the Council of Ministers;

c) Together with the ministries and the other central bodies, it establishes measures for raising the efficiency of exportation by continually reducing the production costs in accordance with the provisions of the plan and the economic and financial standards and by continually improving the quality and the manner of presentation of products and services, so as to ensure the obtaining of foreign prices and rates on a par with the level of the world prices and rates for similar products and services;

d) It provides suitable correlations between the foreign prices of raw materials and the export prices of processed products, pursuing advanced utilization of raw materials and growth in the efficiency of exportation;

e) It follows systematically the evolution of foreign prices and the economic trends on the international market and, together with the State Planning Committee, the Ministry of Finance, the Ministry of Foreign Trade and

International Economic Cooperation, and the ministries producing for exportation, presents proposals for adapting the approved foreign prices and rates of return, in the cases when this is necessary in relation to the changes occurring in foreign prices, under the conditions of providing efficiency to the operations of exportation and importation;

f) It gives advice on the proposals of the ministries for participation in bidding for industrial, agricultural, and zootechnical projects, transportation, execution of work, and in other fields, with regard to the foreign price and the rate of return;

g) It analyzes and reports periodically, together with the State Planning Committee, the Ministry of Finance, the Ministry of Foreign Trade and International Economic Cooperation, and the other central bodies with foreign trade activity, on the manner of attainment of foreign prices and rates of return in exportation, importation, and work and services performed abroad in comparison with the evolution of world prices and presents proposals for necessary measures;

h) It provides the current documentation regarding the evolution of the foreign prices, of the main transactions, and of the commodity supply and demand on the international market, on the basis of the operational data furnished by the Institute of World Economics and on the basis of other sources, in accordance with the law;

i) Together with the Ministry of Foreign Trade and International Economic Cooperation, the State Planning Committee, and the Ministry of Finance, it makes proposals for improving the methodology for determining the efficiency of exportation and importation and for calculating the efficiency indicators for foreign trade activity.

Section 3
Duties in the Field of Price and Rate Control

Article 9. The State Committee for Prices provides the control at the level of the whole economy with regard to the application of prices and rates, to which end:

a) It oversees and follows in ministries, the other central bodies, the local bodies, and the economic units the way in which domestic prices and rates are applied and they fit into the planned foreign prices and rates and informs the Council of Ministers periodically and whenever necessary;

b) It provides guidance to the price departments in the socialist units and coordinates the entire control activity in the field of prices and rates performed by ministries, the other central bodies, local bodies, and the economic units;

c) It verifies in ministries, the other central bodies, the local bodies, and the economic units the way in which provision is made for fitting the material and labor expenditures that are the basis for the setting of prices and rates

into the economic and financial standards and fitting into the foreign prices and rates of return approved by means of the plan;

d) It oversees in ministries, the other central bodies, the local bodies, and the economic units their activity in the field of domestic and foreign prices and rates;

e) It oversees the way in which the legal norms in the field of prices of products meant for domestic consumption and for exportation and those coming from importation and for the rates for services performed are implemented; it asks the ministries, the other central bodies and the local state bodies, the cooperative organizations and other public organizations, and the units subordinate to them to take steps to eliminate the deficiencies and violations found and to punish the guilty parties, informing the Council of Ministers in the situations in which the deficiencies or violations were not eliminated;

f) Together with the State Inspectorate General for Product Quality Control, it oversees and take steps regarding the providing of the agreement between the provisions of the state standards and the level of the prices;

g) It pursues the payment to the budget, in accordance of the law, of the extra profit achieved through unjustified growth in profitability, found through the control actions performed or resulting from the postcalculations for new products; in addition, it pursues the suitable reduction of incorrectly set prices and rates and the recalculation of the fulfillment of the economic and financial plan targets for the current year;

h) It verifies the way in which the maximum market prices and the maximum rates for services are set by the executive committees of the people's councils and the application of them by the producers who sell products on the peasant market, the artisans, or other private parties who perform services for the population, taking the necessary steps for compliance with the legal prices and rates.

Section 4
Other Duties

Article 10. The State Committee for Prices also performs the following duties:

a) It presents to the Council of Ministers reports and information on the evolution of prices and rates in the economy and on the trend of prices on the international market, proposing the measures that are necessary;

b) It collaborates with the State Planning Committee, the Ministry of Finance, the Ministry of Foreign Trade and International Cooperation, the ministries, and the other central bodies on preparing the sole national plan for economic and social development and the state budget in the areas regarding domestic prices and foreign export and import prices.

c) It collaborates with the Central Directorate of Statistics, the ministries, and the other central bodies on determining the price indices and following the manner of attainment of the foreign import and export prices provided in the plan;

d) It gives advice on the draft regulatory and other acts prepared by ministries and other central bodies that involve its sphere of activity, with a view to their presentation for approval;

e) On the basis of and with a view to the execution of the law, it prepares norms in the field of prices and rates and tables and standards for calculation;

f) It gives specialized technical assistance to the socialist bodies and organizations on matters that enter into its sphere of activity;

g) It secures the application of the party and state's policy on selection, training, advanced training, and promotion of personnel in its own apparatus and in the subordinate units, in accordance with the law;

h) It collaborates with similar bodies in other states and with international organizations to which the Socialist Republic of Romania belongs, on matters regarding its field of activity;

i) It coordinates the publication of price and rate catalogs by ministries, the other central bodies, and the local bodies;

j) It is responsible for also performing other duties provided by law.

Article 11. The State Committee for Prices has the right to request from the socialist bodies and organizations the information and data necessary for performing its duties, they being obligated to put them at its disposal.

Chapter III
Organization and Operation

Article 12. The State Committee for Prices is managed by the management council, which decides on the general matters regarding the committee's activity; the collective leadership of the committee's operational activity and the securing of the implementation of the management council's decisions are done through its executive bureau.

The committee's management council and its executive bureau, bodies with a deliberative character, are organized and operate in accordance with Decree No 76/1973 on the Management of the Ministries and the Other Central Bodies of the State Administration on the Basis of the Principle of Collective Leadership.

Article 13. The State Committee for Prices has in its management a chairman and two vice chairmen.

The chairman of the State Committee for Prices is a member of the Council of Ministers and is appointed by means of a presidential decree.

The vice chairmen of the State Committee for Prices are appointed by means of a presidential decree, and their duties are established by the management council of the committee.

Article 14. The chairman informs the Management Council of the State Committee for Prices about the main problems solved in the period between sessions.

Article 15. The chairman represents the State Committee for Prices in relations with other domestic bodies and organizations and in international relations.

Article 16. The State Committee for Prices has the following organizational structure:

a) The Directorate for Domestic Prices;

b) The Directorate for Foreign Prices and Efficiency in Foreign Trade;

c) The Directorate for Synthesis, the Plan, and Price Coordination;

d) The State Inspectorate for Price Control;

e) The Service for Organization, Personnel, Education, Pay, Protocol, Finance and Accounting, Secret Documents, the Secretariat, and Administration.

The organizational structure according to work departments and the maximum number of personnel in the apparatus of the State Committee for Prices are provided in Appendices Nos 1 and 2. (Footnote *) (The appendices are communicated to the institutions involved.)

The duties and the operating norms of the departments in the structure of the State Committee for Prices are established, in accordance with the law, by means of the regulations for organization and operation, which are approved by the management council of the committee.

Article 17. The State Inspectorate for Price Control is managed by a director general.

The county state inspectorates for price control and the State Inspectorate for Price Control of the Municipality of Bucharest are organized and operate under the subordination of the State Inspectorate for Price Control.

Chapter IV
Final Provisions

Article 18. The provisions of Decree No 367/1980 on Some Measures for the Rational Utilization of the Personnel in the Socialist Units, whose applicability was extended by means of Decree No 420/1985, do not apply until 31 December

1987 to the posts in the units from and to which personnel are transferred as a result of the provisions of the present decree.

Article 19. The State Planning Committee and the Ministry of Finance, on the basis of the proposals of the State Committee for Prices, will submit for approval the changes that result for the State Committee for Prices from the application of the present decree in the state budget and in the sole national plan for economic development for 1986.

Article 20. Appendices Nos 1 and 2 are an integral part of the present decree.

Article 21. Decree No 317/1972 on the Organization and Operation of the State Committee for Prices, with the subsequent amendments, is repealed.

Nicolae Ceausescu
Chairman of the Socialist Republic of Romania

Bucharest, 4 November 1986.
No 359.

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CSO: 2700/73

TECHNOLOGICAL REVOLUTION'S SOCIAL EFFECTS DISCUSSED

East Berlin EINHEIT in German Vol 41 No 11, Nov 86 (signed to press 14 Oct 86) pp 990-996

[Article by Prof Dr Harry Nick, research department head at the Institute for the Political Economy of Socialism at the SED Central Committee's Academy of Social Sciences: "On Ideological and Social Aspects of the Scientific-Technical Revolution"]

[Text] Aside of the problems concerning the preservation of peace, many people are much preoccupied with the changes in their lives brought about by the scientific-technological revolution, the demands it makes on their knowledge and capability, their attitudes and perceptions, and of the opportunities offered them to develop their creative powers for making human existence easier and more comfortable. Social systems all over the world are increasingly judged by their capacity to make the scientific-technological revolution the servant of humanity. At the same time all these issues are moving inexorably to the center of the intellectual discussions of our age.

This is not surprising in view of the fast pace of the scientific-technological revolution that has entered a new stage with the development of microelectronics and, above all, its application for flexible automation, the technicalization of intellectual efforts, biotechnology and other major changes. In terms of both depth and range the effects of the scientific-technological revolution are still rapidly multiplying. The satisfactory progress of our republic is largely based on the fact that our party correctly diagnosed the extent and magnitude of the scientific-technological revolution, early and wholeheartedly motivated our people to meet the challenges of the scientifgic-technological revolution, developed and still resolutely pursues an economic strategy, scientific and educational policies directed to the handling of the scientific-technological revolution. This is particularly evident in our successful economic development, increasingly devoted to mastering the scientific-technological revolution. As Comrade Erich Honecker said, "our party's economic strategy looks toward the year 2000 and is oriented to the need even more effectively to combine the benefits of socialism with the achievements of the scientific-technological revolution.(1)

Reflections on the social effects of the scientific-technological revolution, the ideological debate about it between, in particular, Marxist and bourgeois

ideology are more and more intensive. We are increasingly preoccupied with the scientific-technological revolution, especially because we are coming to more fully appreciate what it is, and what it will be able to effect in the foreseeable future.

Break in the History of the Productive Forces

We can certainly no longer doubt that the scientific-technological revolution, beginning around the middle of our century, initiated the sharpest break in the history of the productive forces. It is characterized by two general features regarding their effect in terms of breadth and depth. Firstly it represents a universal revolutionary upheaval in the material-objective existential and developmental conditions of society. Its course involves all sectors of reality in the process of the confrontation between man and nature, many for the first time ever: Space, the microcosm--in other words the world of the atom and particles--, the microstructures of living matter--above all the cell. All four concrete components of the productive forces--working tools, materials for processing, technological processes and sources of energy--are changed radically. The two basic functions of human labor--physical and mental effort--have become capable of technicalization. As a result the function of man as the main productive force is being lifted to a new and higher stage.

The extent of its profound effects corresponds to this universality of the scientific-technological revolution. The scientific-technological revolution secondly signifies that, as never before in history, man has been enabled to shape his fundamental material-objective living and development conditions--both in terms of quantity and, more importantly, of quality, because entirely new and unprecedented opportunities for organization have been made available to man (as, for example, in biotechnology). This, again, involves the arrival of global problems that have as their subject mankind as a whole and as their objective the earth as a whole, the entire world and, again, mankind as a whole. Our generation, therefore, carries an unprecedented responsibility for all future generations. It needs to consciously absorb fundamental and vital facts unknown to any previous generations. In the first and most important instance this is the fact that the scientific-technological revolution spawned the practical possibility of the annihilation of human civilization, of all life on our planet. The Soviet Union and the countries of the socialist community developed, proposed and--insofar as this can be done unilaterally--practiced a political ethic for the communion of nations and peoples as well as concrete disarmament concepts, that takes account of this global situation.

Another of these fundamental facts is this: In the course of millions of years, balances and circulations evolved in nature. Now they have started moving and changing, and conscious efforts are therefore needed to maintain these balances. It is certainly also a fact for this millenium that man is able for the first time by the manipulation of genes to develop new species not produced by nature. Yet another and new fundamental fact is the beginning mass technicalization of mental efforts, multiplying the mental powers of man. This, above all, will give rise to the most enduring effects on the growth of the productive force of human labor, the changes in the contents and conditions of work and the material prerequisites of human lifestyles.

We are witnessing a rapid growth in the numbers of people whose labors are profoundly changed by the upheavals involved in the scientific-technological revolution. Let us remember that, according to the Eleventh SED Congress resolutions, half a million people in our country will be working at CAD/CAM stations by 1990.

Mastery of the Scientific-Technological Revolution: Test of a Humanist Social Constitution

Still, our imagination is inspired not only by these actual changes but also those that may be foreseen or surmised. Flocks of bourgeois technological philosophers are busily and emotionally pontificating about their fears, aiming to apply to them a scholarly coating while citing the most modern developmental trends of the productive forces. They wish to disguise the fact that these new garments tend to cover ancient bourgeois thoughts, for example the attempt--already criticized by Marx--on the one hand "to stultefy human life to a material force" and, on the other, "equip material forces with a spiritual life," attribute demonic features to technology.(2)

Two groups of issues, in particular, are shifted to the forefront of the debate. The first one is the question of the significance of economic growth for the improvement of the peoples' living conditions, supported mainly by science and technology. The assertion of the necessity for "restrained growth" is common to all those who dislike our resolutely growth oriented economic policy because they dislike our economic growth and its very obvious social results, because they dislike socialism generally; also those who, confronted with the evident and crisis ridden growth difficulties in capitalism, are unable to defend capitalism except by downplaying the role of economic growth in general; and finally those who, though dimly perceiving the unsocial consequences of technical progress in capitalism, the loss of any meaning of labor and the destruction of the natural environment, are yet unable to pinpoint the socioeconomic causes of these evils.

A second group of issues is concerned with the possibility of socially mastering the technological development. This amounts to the fear that technology may one of these days turn out to be more than mankind can properly handle. Frequently cited in this connection is the image of the sorcerer's apprentice unable to rid himself of the spirits he himself had summoned.

In our age of profound revolutionary upheavals in the productive forces we should be specially appreciative of the enormous significance and fruitfulness of the Marxist-Leninist interpretation of history that explains the role of technology and, consequently, the historical dimension of the current scientific-technological revolution, mainly from the standpoint of human labor, the increase in its productivity. Rapidly growing at the same time is the importance of that which we might describe as the theoretical value of our practical experiences. The concrete evidence that a sensibly organized society is able to consistently use science and technology to serve man and enrich his life--this evidence is among the most significant experiences that socialism nowadays offers mankind. The impact of this message is bound to grow rapidly. Socialist society's ability to translate economic progress into social advances, this fundamental economic and political-moral superiority of

socialism also represents the basis of the technology-friendly attitudes prevalent in our country.

In general terms, technology is the totality of the material-objective means created by human labor and used by man in his conscious confrontation with nature in order to convert them to use values serving the satisfaction of his needs. Technology and technological progress, in particular, repeatedly aid man to resolve the contradiction between his growing needs (new needs constantly arise in the dialectic interplay with the satisfaction of previous ones) and his limited ability to raise the productivity of his labor with existing forces and resources. The advance of technology is the decisive factor contributing dynamism to the development of the productive force of human labor, because the biological potential of the human labor capacity--the energetic permanent performance capacity of man, the speed and precision of the execution of logical operations, for example--barely changes from one generation to the next. Technology is the determinant material basis of the special kind of evolution inherent in the genus man. It proceeds by way of the accumulation and handing on of knowledge and experiences, in dialectic interaction with the production and reproduction of an artificial environment, a "second" nature, created by man. Just like labor (of which it is a means), technology represents an essential element, the foundation of human and social progress. Marx described it as "the embodied essential forces of man."(3) Every machine demonstrates for us the knowledge and experiences of all previous generations. Technology-friendliness is basically part and parcel of philantropy. Society's ability resolutely to make scientific-technological progress subservient to man, to convert scientific advances to social progress, to make human labor more productive and ensure meaningful work for all members of society able to work, to improve the contents and conditions of work--this ability has become one of the most important tests for the humanist constitution of society.

How about the need for permanent economic growth, the advance of science and technology? The reasons cited for approximating economic growth with unorganic and unnatural developments often amount to comparisons with growth in nature. The economic organism, though, is a social organism and subject to entirely different laws. True, a tree does not grow to the sky, but in economic matters it is equally true to say that an economic organism is sick if it fails to grow or is unable to grow as it should if all economic resources were deployed. Eventually the progress of technology decisively supporting permanent economic growth is just as infinite as the advance in human knowledge.

The dispute about the prospects of economic growth often gives the impression of the unspoken assumption that somewhere human needs are satisfied at such a high standard as to justify "restrained" economic growth in the future. In actual fact that is not the case anywhere, not in the developed capitalist countries where frequently even the elementary material needs of many people are not satisfied, let alone in many Third World countries where hundreds of thousands are starving to death due to insufficient economic growth. As for

the socialist countries, the programs and policy of the communist and workers' parties leave no doubt that substantial economic growth is the indispensable basis of their conception of society.

Noting the incessant talk of "organic growth" in capitalist countries, we are bound to ask ourselves who in fact promotes low or even "zero" growth. The concept is favored neither by the monopolies nor the state nor the labor unions. The reason for the disparagement of the role of economic growth is obviously to be found in the real growth difficulties experienced, the actual "zero growth" recorded in some years. Evidently this also explains the attempts to "revalue" labor. Upon closer scrutiny, these turn out to amount to an attempt to revalue unemployment. Surely it must be one of the most unpalatable perceptions of bourgeois ideologues that the capitalist society can no longer rid itself of mass unemployment. Since that society is unwilling (and also unable) to live with a major blemish, it wishes to remove the blemish from unemployment. We are obviously sympathetic to those democratic forces who brand unemployment as the outstanding social problem and fight for its elimination.

The dubiosity of the pushy-optimistic assessments of technical progress and economic growth by bourgeois politicians and ideologues even more clearly shows up the fact that, by any humanist criteria, the capitalist society is unable to arrive at a reasonable attitude to scientific-technological progress. Actually, growth and technology "optimistic" doctrines have resumed renewed prevalence in recent years. They are promoted especially by more conservative-reactionary circles and linked with the call for more exploitation, more "self-providence" by the individual, the gradual demolition of the social services. They repeat the assertion (refuted by practice) that scientific-technological progress might result in the softening of social contradictions in capitalist conditions. However, all this is more remote from reality, politically more misleading than some technology pessimistic assumptions that often at least indicate some kind of feeling for the real social effects of technical progress in a capitalist society.

We in our country demonstrate that it is indeed possible in socialist conditions to handle the scientific-technological revolution in combination with social security. And this state of affairs will continue in future, too. With an eye on the year 2000 and beyond we are of course also preoccupied with the "future of labor," mainly in so far as we consciously utilize all the opportunities offered by modern science and technology--especially the key technologies--in order to organize work to offer more satisfaction, to be more creative and conducive to the development of the personality. The fact that at the same time work is becoming more productive to an extent unsuspected hitherto does not lead anybody here to feel the fear--widespread in capitalist countries--that society might in the foreseeable future experience the "tapering off" of work so that increasing numbers of people will have to manage without paid work and be compelled to seek a meaningful life elsewhere. At this stage we obviously do not need to speculate about the likely rate of economic growth and working hours in 20, 30 or 100 years from now. However, we are quite sure of one thing: No meaningful life is possible without meaningful work. A sensibly organized society cannot and will not ever be without a stock of meaningful work for all those able to work. High and

stable economic growth, increasingly sustained by the processes of the scientific-technological revolution, is the sure material basis of the developmental advance of the socialist society in all its spheres.

Technology on a Human Scale

In socialist conditions scientific-technological progress will not only make human life more agreeable but also tend to make it more secure. Of course we are increasingly dependent on the greatest possible functional reliability of our technicalized environment. Still, the advance of technology also and constantly brings about new opportunities for in fact raising the functional reliability of the equipment.

Modern technical development certainly also involves the need to much more carefully think about their possible effects. The progress of "diagnostic equipment," of automated safety equipment, is increasingly the prerequisite for the practical feasibility of technical advances. The opportunities for foreseeing dangers and averting them in practice are also growing. They include the possibility of the objectified--in other words automated--self-observation, supervision and correction of technical systems. Rapidly evolving sensor equipment, testing and measuring equipment, high-performance microelectronic controls are expanding our ability more surely to handle technical systems.

Nor is it true that the advance of technology tends to become more and more anonymous for man, less and less comprehensible and harder and harder to control. The opposite is the case. Admittedly, microstructures are increasingly the object of technical progress, and they do escape direct physical observation. However, here too technology itself comes to our aid. Modern test methods, computer equipment and the screen itself render visible the processes we are unable to perceive by our sensory organs.

Of course technology is increasingly complex. Still, the advance of technology also equips us to, so to speak, shift this growing complexity to technical systems and, at the junction between man and equipment, so to organize affairs that man's association with technology becomes easier and more interesting. The development of information and communication equipment clearly aims at facilitating its handling and enabling it to be carried on in normal language (at present in writing only but later also orally). More and more tasks can be accomplished without mastery of program languages (at the same time, though, knowledge of program languages is becoming indispensable for a growing number of working people). All this expands the field of creative work. While the importance of technological discipline increases, the technological involvement of man is loosened and superseded in many processes. Man-technology relations are turning more flexible, so to speak. In other words, we have greater opportunities for consciously organizing job contents and working conditions. Indeed, it is precisely the most modern equipment that increasingly facilitates "technology on a human scale." We note again and again that the development of technology itself yields opportunities for solving the problems it earlier created, that--to cite Marx--the objective prerequisites for the solution of contradictions arise alongside their evolution and development. Admittedly, this does not always

happen at one and the same time. It is quite possible for such contradictions in the development of the productive forces to be exacerbated for certain periods. If we adopt an undialectical approach to such developmental processes, fears may indeed arise, particularly if the phase of the evolution and exacerbation of the contradiction is treated in isolation from the developmental processes, and the trends prevailing in this phase are merely quantitatively extrapolated, if we fail to search for future qualitative changes in these developmental processes.

In the 1950's and early 1960's, the countries of capitalism were much concerned with what they called the crisis of information. It was feared that the rate of the accumulation of new knowledge would increasingly exceed our ability to systematize and handle existing knowledge, that the burden of already accumulated knowledge would become steadily heavier until a point at which mankind could simply no longer cope with it. Further scientific advances might, therefore, be increasingly dubious. This assertion was supported by such actual phenomena as the rapidly rising incidence of multiple discoveries and inventions. It was said to be more rewarding to once more research a problem than to try and find out whether it had already been described somewhere else. This danger no longer exists. The development of information and communication equipment has established a totally different--indeed opposite--trend: Access to existing knowledge is easier, faster and cheaper.

Without wishing to draw comparisons regarding the dimensions of the problems or the opportunities for their solution, we may certainly assert that the lines of argument, the methodological approach to the characterization of the new ecological situation frequently resemble those used earlier to describe the crisis of information. We certainly need to profoundly rethink our treatment of nature, above all the treatment of natural substances by our method of production. Production growth needs to be separated from the curve of the consumption of natural substances. We need wasteless technologies, the progressive conversion of waste products to raw materials and complete material circuits. In other words, environmental control must be increasingly rewarding in economic terms also, and economic growth must improve the natural environment by the way it is caused rather than by the way its results are used. Even so we will have to spend a lot of money on environmental control without this money having any direct positive economic effect. The crucial issue is the transition from the extensive relationship between production and natural substances to the intensive exploitation of the natural potential as an important element of the intensification of our reproduction process. We only need to recall the promising possibilities offered by biotechnologicl processes to realize that scientific-technological advances give rise to ever greater opportunities. For example we have many indications that, 100 years from now, our rivers will once more be as clean as 100 years ago. The "age of industry," the "times of a relatively high rate of economic growth" will not be an "episode" in human history, replaced by the so-called "post-industrial society" with low economic growth. It will rather be the exacerbation of the ecological situation that will turn out to be an "episode." Admittedly this turns on the presumption that prudent use is made of the possibilities offered by science and technology, that the enormous resources now squandered on armaments due to imperialist reaction gambling on arms modernization are made

available for the direct opposite--growth alongside the preservation of resources and the environment--, that countries with different social systems cooperate in solving the worldwide problems of mankind.

Finally, unless mankind is to be exposed to the utmost peril, none of the developments issuing from the scientific-technological revolution may be subjected to the unbridled operation of the profit principle. That applies mainly to arms production. In the interest of the enrichment of human life, though, it also applies to the use of biotechnology and information technologies. Indeed, it holds true for all of man's vital spheres, not least for the changes in human labor.

We do not need a "different" technology, we need a society that puts these new productive forces unreservedly at the service of humanity instead of massively converting them to "destructive forces" (Marx). The scientific-technological revolution has not demonstrated the "obsolescence of man" but the obsolescence of a society that carries within it the social causes of wars and is unable to conquer the duality of scientific-technological progress.

FOOTNOTES

1. "Bericht des Zentralkomitees der Sozialistischen Einheitspartei Deutschlands an den XI.Parteitag der SED, Berichterstatter: Genosse Erich Honecker" [SED CC Committee Report to the Eleventh SED Party Congress, Reporter: Comrade Erich Honecker], Dietz Verlag, Berlin 1986, p 49.

2. Karl Marx, "Address at the Annual Celebration of the 'People's Paper' on 14 April 1856 in London," Collected Works, Vol 12, Dietz Verlag, Berlin 1961, p 4.

3. Karl Marx, "Economic-Philosophical Manuscripts from 1844," Collected Works, Vol 40, Dietz Verlag, Berlin 1985, p 543.

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